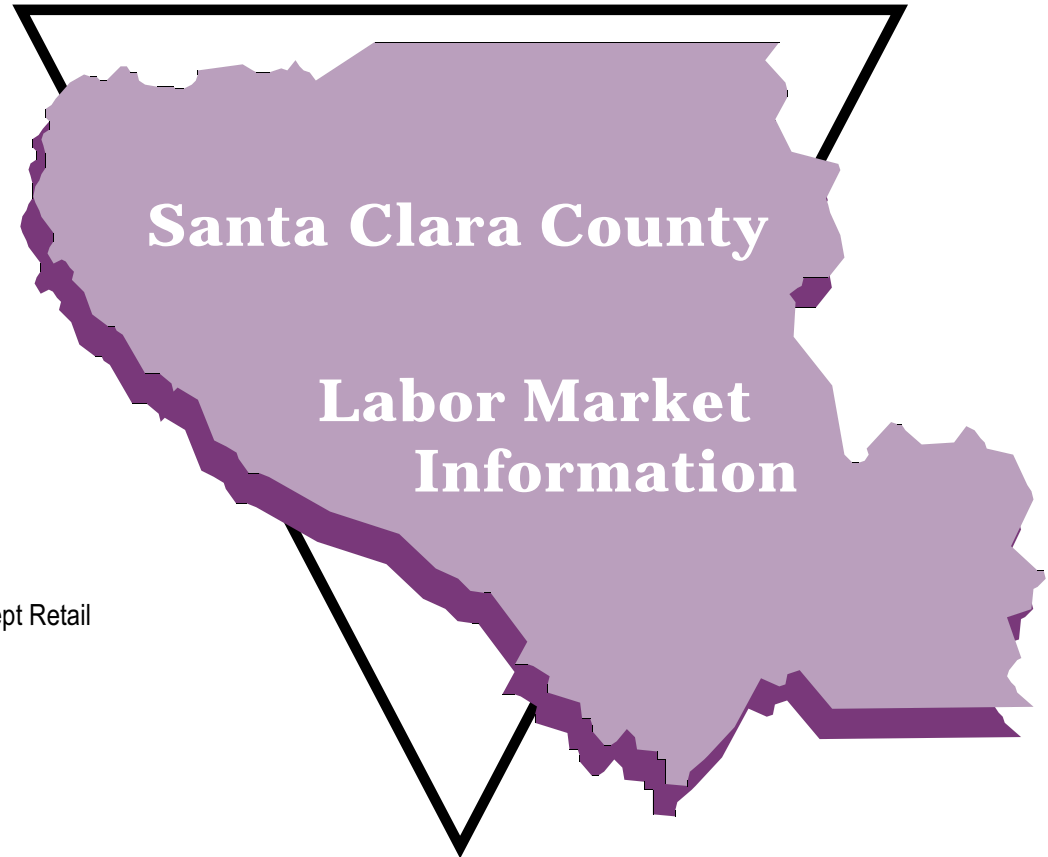

OCCUPATIONAL OUTLOOK 1996

Automotive Mechanics
Bus & Truck Mechanics & Diesel Engine Specialists
Compliance Officers & Enforcement Inspectors – Except Construction
Computer-Aided Audio/Visual Engineers
Computer Animators
Dental Assistants
Electrical & Electronic Engineering Technicians & Technologists
Electrical & Electronic Engineers
Farm Equipment Operators
Industrial Engineers – Except Safety
Integrated Circuit Fabricators/Operators
Integrated Circuit Layout Designers
Internet Server Designers & Administrators (Webmasters)
Librarians – Professional
Marketing, Advertising & Public Relations Managers
Medical Assistants
Pharmacy Technicians
Sales Engineers
Sales Representatives, Scientific & Related Products & Services – Except Retail
Secretaries, General
Social Workers – Medical & Psychiatric
Software Engineers
Traffic, Shipping, Receiving Clerks
Truck Drivers – Heavy or Tractor Trailer
Wholesale & Retail Buyers – Except Farm Products



NOVA
Private Industry Council

In cooperation with the State of California
Employment Development Department
Labor Market Information Division

The California Cooperative
CCOIS
Occupational Information System

SANTA CLARA COUNTY A LABOR MARKET INFORMATION STUDY 1996

A PRODUCT OF

THE CALIFORNIA COOPERATIVE OCCUPATIONAL INFORMATION SYSTEM

SPONSORED BY

THE NOVA PRIVATE INDUSTRY COUNCIL,

THE CALIFORNIA EMPLOYMENT DEVELOPMENT DEPARTMENT

AND THE CALIFORNIA OCCUPATIONAL INFORMATION COORDINATING COMMITTEE

DECEMBER, 1996

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And all the other LMID staff that provided products and technical assistance

EMPLOYERS

The employers who took their valuable time to answer
over 400 occupational surveys

RESOURCE PEOPLE

Employers, educators, union representatives and other resource people
who were contacted because of their expertise in an occupation

TABLE OF CONTENTS

INTRODUCTION	1-1 thru 1-3
PROJECT METHODOLOGY	2-1 thru 2-3
DESCRIPTION OF OCCUPATIONAL TABLES	3-1 thru 3-8
TABLES	4-1 thru 4-25
Automotive Mechanics	4-1
Bus and Truck Mechanics and Diesel Engine Specialists	4-2
Compliance Officers and Enforcement Inspectors - Except Construction	4-3
Computer Aided Audio / Visual Engineers	4-4
Computer Animators.	4-5
Dental Assistants..	4-6
Electrical and Electronic Engineering Technicians and Technologists	4-7
Electrical and Electronic Engineers	4-8
Farm Equipment Operators	4-9
Industrial Engineers - Except Safety.	4-10
Integrated Circuit Fabricators / Operators.	4-11
Integrated Circuit Layout Designers	4-12
Internet Server Designers and Administrators (Webmasters)	4-13
Librarians - Professional.	4-14
Marketing, Advertising, and Public Relations Managers.	4-15
Medical Assistants.	4-16
Pharmacy Technicians.	4-17
Sales Engineers	4-18
Sales Representatives, Scientific and Related Products and Services - Except Retail	4-19
Secretaries, General	4-20
Social Workers - Medical and Psychiatric	4-21
Software Engineers.	4-22
Traffic, Shipping, and Receiving Clerks	4-23
Truck Drivers - Heavy or Tractor Trailer	4-24
Wholesale and Retail Buyers - Except Farm Products	4-25
OCCUPATIONS PREVIOUSLY STUDIED.	Appendix - A

SECTION 1: INTRODUCTION

Overview

The NOVA Private Industry Council Labor Market Information Study is produced as part of a state-wide project called the California Cooperative Occupational Information System (CCOIS). The program is a cooperative effort between NOVA Private Industry Council and the State of California Employment Development Department (EDD), Labor Market Information Division (LMID). It is an annual study conducted to improve the match between the labor needs of employers and the skills of job seekers by providing current, localized occupational information. Funding for this study is provided by EDD and NOVA.

NOVA Private Industry Council

NOVA Private Industry Council (NOVA PIC) includes representatives of local business, industry, education and service agencies. It was formed in 1983 to implement the federal Job Training Partnership Act (JTPA) for North Santa Clara County. The services provided by the NOVA PIC are administered by the City of Sunnyvale.

The services provided by the NOVA PIC benefit both employers and job seekers. Employers can receive assistance with their hiring, retraining or out placement needs. Job seekers may receive vocational testing and counseling as well as assistance in obtaining the competitive skills necessary to enter the work force. Additionally, the NOVA PIC offers services funded outside of JTPA such as this labor market information study and special projects for employee retraining, veterans, youth, the homeless and individuals with disabilities.

As a primary administrator of local employment and training funds and an organization established to coordinate private and public efforts in that area, NOVA PIC was in an ideal position to act as the coordinator of the local portion of the California Cooperative Occupational Information System. NOVA PIC therefore sought and obtained funding to be one of the first pilot sites in the state for this project. 1996 marks the eighth year of NOVA PIC's participation in the project.

Labor Market Information Division (LMID)

This project is administered by LMID to encourage state/local cooperation in gathering, analyzing and distributing occupational information. LMID has access to an extensive state data base from which to provide information and projections concerning local labor market

conditions. LMID's expertise, technical assistance and data base have all been made available to NOVA PIC, and through this publication are now being made available to you.

Note: The various tasks of each organization in the survey process are described in Section 2: Project Methodology.

Uses Of The Data

The data in this publication has been gathered, analyzed, and is distributed with the intention of being used by a variety of organizations and individuals for many different purposes. Some of the most important are listed below.

Career Decisions

The Occupational Tables have been specifically designed for use by career counselors and job seekers to provide easy to read local information on twenty-five occupations. The localized information includes employer requirements and preferences, wages, and labor supply and demand. It helps career counselors and job seekers to make informed occupational choices based on skills, abilities, interests, education, and personal needs.

Note: In Section 3 (Description of Occupational Outlook Tables) each section of the table is defined. Suggestions for interpreting the data have been made in italics. It is hoped that this format will make it easier for career counselors to use this data effectively when working with clients.

Placement and Job Development

When job counselors and job developers are looking for appropriate placements for clients, the Occupational Outlook Tables can also be of help.

Supply/Demand information is provided which could assist job seekers in making a decision as to whether a particular occupation is appropriate for their skills, abilities, education and needs. The information may help the counselor and job seeker to assess the job market and to become more aware of the job skills which Santa Clara County employers rate as important for entry into the occupation. The information provided under the title "Principal Employing Industries" can guide the job seeker toward industries which are the largest sources of employment for that occupation.

Vocational Program Planning

The report provides local planners and administrators with employment data including occupational size and expected growth rates. Program planners can use this data to evaluate, improve, and eliminate programs, or to plan new programs.

The Occupational Tables provide local planners with the Supply/Demand, Occupational

	<p><i>Size and Expected Growth Rate information. This section summarizes data collected from state tax records as well as a federal occupational survey and information collected directly from local employers. This multi-source information will make it possible to make more confident judgments concerning the suitability of occupations for training.</i></p>
<i>Curriculum Design</i>	<p>Training providers can assess and update their curriculum based on current employer needs and projected trends, as indicated in this report.</p> <p><i>The "Job Skills" section of the Occupational Tables, which provides information on employer skill preferences, will be of particular value to curriculum planners because it rates skills according to employers' evaluation as very important and important.</i></p>
<i>Economic Development</i>	<p>Local government agencies and economic development organizations will find information on the labor pool, such as occupational size, expected growth rates, and wages, useful in determining the potential for business growth and development in the Santa Clara labor market area.</p> <p><i>Information on Supply/Demand, Occupational Size and Growth Rates, and Wage Data can be used in establishing the suitability of Santa Clara County for specific types of business growth and development.</i></p>
<i>Program Marketing</i>	<p>Training providers can effectively market their programs by informing students, employers, and others that the chances for job placements are much greater because their training programs are developed using reliable local occupational data.</p>
<i>Human Resource Management</i>	<p>Small business owners and large corporate human resource directors alike can use this report to determine competitive wages and benefits, improve their recruitment methods, and assess the availability of qualified workers for business relocation or expansion purposes.</p>
	<p><i>It is hoped that this publication will meet the needs of its users. If you have any suggestions for improvement, please contact NOVA's LMI Project Coordinator at (408) 730-7526.</i></p>

SECTION 2: PROJECT METHODOLOGY

Occupational Forecasts

LMID developed Occupational Forecast Tables specifically for NOVA PIC. These tables provided 1992 employment by occupation, projected seven year growth, and separation figures for occupations in Santa Clara in which there was employment of 50 or more. Occupational distribution by industry was also provided.

These tables contain information on over 400 occupations. They were generated using state unemployment insurance records of Santa Clara County businesses and data from a federally financed Occupational Employment Statistics (OES) survey of occupational distribution within industries, identified according to Standard Industrial Classification (SIC) titles.

Occupational Selection Criteria

NOVA PIC applied the following criteria to narrow the list of possible occupations for survey to twenty-five:

- The occupation must have a substantial employment base in the county;
- There must be a substantial number of projected job openings in the county;
- There appears to be present and future occupational growth;
- There appears to be substantial potential for earning capacity;
- The training time required for the occupation must be two years or less, allowing for some exceptions based on the strength of the other criteria;
- The skills requirements are impacted by some fluctuation in the labor market or emerging technology.

A preliminary list of occupations was developed. This list was reviewed by representatives of community based vocational training programs, educational institutions, organized labor, economic development organizations, and the PIC. From the input of these organizations, some occupations were eliminated and others added, and the final list of twenty five occupations to be studied was selected. Each occupation was then clearly defined and appropriate OES/DOT title was assigned.

Survey Sample Selection

After the occupations were selected, defined, and the appropriate OES/DOT titles assigned, LMID developed an employer sample for each occupation. One consideration in drawing up the employer sample was the pattern of distribution of industries in which the occupation could be found. Industries are classified by the Standard Industrial Classification manual. There are nine major industry groups; some examples are agriculture, construction, manufacturing, and retail trade.

LMID staff, using detailed data bases on employers and occupational staffing within industries, chose a representative sample of employers for each of the occupations. For example, a medical assistant would generally work for a firm classified in the health services category, whereas a word processor may be scattered across several industries -- health services, retail trade, manufacturing, etc. This was considered for each occupation when establishing the sample of employers that would receive questionnaires. If 20 percent of Santa Clara County workers in an occupation were found in a specific industry, then 20 percent of the sample was drawn from that industry.

The sample was carefully reviewed, and employers were called to verify company name and address, confirm the existence of the occupation at the company, and obtain the name of a contact person. Employers were added or deleted as appropriate. The final sample included up to forty employers for each occupation.

Questionnaire Development

Separate questionnaires were developed for each of the 25 occupations. Since the standard questionnaire did not contain a skills question, NOVA developed a third page to cover skills for each occupation. The questionnaires were mailed June 1996.

Survey Procedures

After the mailing, all employers who did not return a completed questionnaire by the designated deadline received a follow-up phone call. Employers were given the opportunity to respond to the questionnaire over the phone or return it by FAX or mail. Additional employers were added to the original sample as necessary to ensure meeting a 50% response rate and to survey 40% of the sample's projected employment size.

All surveys were reviewed for accuracy of the data, and employers were recontacted if answers were missing, unclear or conflicted with other answers. In addition to contacting employers, the NOVA staff contacted labor unions, employment agencies, training providers, etc. to learn more about a specific occupation.

Tabulation and Results

The survey responses were entered into a data base and tabulations were prepared. From these tabulations, the data was analyzed and the final occupational summary reports were prepared by NOVA staff. Each occupational statement provides information on training and hiring requirements, size of the occupation and growth rate expected, supply and demand assessment, major employment sources, and other information. Specific employer information is confidential and cannot be released.

SECTION 3 DESCRIPTION OF OCCUPATIONAL TABLES

Overview

The Occupational Tables (pages 4-1 to 4-25) present a summary of the project's findings by occupation. A separate table is presented for each of the twenty-five occupations for which a survey was completed. Major sections of each table include:

- **The Occupational Title and OES/DOT Code(s)**
- **Occupational Definition**
- **Wages / Work Patterns / Benefits**
- **Employment Trends**
- **Job Skills**
- **Education, Training & Experience**
- **Other Information**

Throughout the tables, the terms "most," "many", "some" and "few" are assigned specific values to describe the survey results. In using these terms, the following guidelines were applied:

- **Most** = 51% - 100%
- **Many** = 35-50%
- **Some** = 10-34%
- **Few** = Less than 10%

Following is a brief description of each section of the tables, definitions of terms relevant to the specific sections, and suggestions concerning how the information can be used effectively.

Title, Code and Definition

Occupations are listed alphabetically by their Occupational Employment Statistics (OES) titles. The titles and definitions are based on the OES dictionary published by the Bureau of Labor Statistics, October 1991. An OES code is not listed for the following occupations: Computer Animators, Integrated Circuit Fabricators/Operators, Integrated Circuit Layout Designers, Software Engineers, Computer Aided Audio/Visual Engineers, and Internet Server Designers and Administrators (Webmasters), since they do not fit into any existing OES classifications. Instead, the Dictionary of Occupational Titles (DOT) code is used. These occupations were selected for the survey based on the needs of the local users of occupational

Wages / Work Patterns / Benefits

information.

This icon represents those occupations that have been identified as non-traditional occupations for women. An occupation is determined to be non-traditional if, 25% or less of its employment is composed of women.

Wage data serves as a guide for comparing salaries of one occupation to those of another. It also helps to ascertain the approximate salary ranges (per hour, rounded to the nearest quarter) and median wages (per hour, as reported) for each occupation. Where applicable, this information is provided for both union and non-union employees.

Please note that this data is not meant to represent official prevailing wages and should be used with caution (if at all) for wage and salary administration. It reflects information gathered in the summer of 1996 and does not include the Federal minimum wage increase of October 1, 1996. Wages are reported for three occupational levels as follows:

- * **Entry Level, No Experience:** wages generally paid to persons trained or qualified but with little or no paid experience in the occupation.
- * **Experienced, New to Firm:** starting wage generally paid to journey-level or experienced persons who are just starting at the firm.
- * **3+ Years Experience w/Firm:** wages generally paid to individuals with three years or more experience at the firm in that occupation.

This section also identifies typical working hours of employees in the occupation. More specifically, are they full time, part time, temporary/on-call, and/or seasonal, and how many hours per week do they work on average?

Where applicable, the percentage of unionized employees and firms in the occupation which hire unionized employees is indicated. Unionization often affects factors such as methods of recruitment, wages, and fringe benefits.

Lastly, this section identifies what percentage of the employers surveyed offer benefits to employees (both full time and part time where applicable) in the occupation.

Employment Trends

Supply and demand information, occupational forecast, and a listing of principal employing industries is provided in this section.

Supply and Demand

Three basic pieces of information are provided in this sub-section: the level of difficulty employers have finding both inexperienced as well as fully experienced and qualified applicants, sources of last year's job opportunities in the occupation, and employers' projection about the growth of the occupation over the next three years.

Terms used to describe levels of difficulty employers have finding candidates are as follows:

Very Difficult - Employers have great difficulty finding qualified applicants. The labor market is *very good* for the job seeker. Demand is considerably greater than the supply of qualified applicants.

Somewhat Difficult - Employers have some difficulty finding qualified applicants. The labor market is *good* for the job seeker. Demand is somewhat greater than the supply of qualified applicants.

A Little Difficult - Employers have little difficulty finding qualified applicants. The labor market is *competitive* for the job seeker. Supply of qualified applicants is somewhat larger than demand.

Not Difficult - Employers have no difficulty finding qualified applicants. The labor market is *very competitive* for the job seeker. Supply of qualified applicants is considerably greater than demand.

Sources of last year's job opportunities may include turnover (employees leaving their jobs), newly created positions, temporary positions, and/or internal promotions or transfers.

Turnover can be an indication of a variety of factors both negative and positive. For instance, it could mean that promotional opportunities are high, that it is a good starting place for moving into other occupations, or that separations from the company or organization are high. On the other hand, it could indicate that working conditions, wages, or benefits are not competitive. High turnover can provide an indication of where job opportunities might be plentiful even though the occupation itself is not growing, or low turnover could make it more difficult to enter an occupation particularly if supply exceeds demand.

In the final part of this sub-section, we report whether employers think employment in the occupation will grow, remain stable, or decline within the next three years.

Size and Growth

Overall, this short narrative section provides the best current indication on the degree of ease or difficulty for a job seeker to obtain employment in the occupation. The information is not absolute, and it can change over time, but it provides a good tool in selecting an occupation for employment in the immediate future. Other factors, such as size of the occupation, projected growth, and separations (discussed below), should also be taken into consideration when deciding on the suitability of an occupation.

In most cases, the most desirable occupations requiring the least training will be difficult to enter. Occupations that are easy to enter may have elements that are not attractive to the job seeker. Sometimes starting in an occupation considered less desirable will provide the job seeker with the experience required to enter a more desirable occupation at a later time.

This information is based on EDD Occupational Forecast Tables, 1992-1999, and provided to make it convenient to find specific information about size, growth, and separations in the occupation.

Size and growth projections are generally the numbers that are most relied upon to provide an indication of whether an occupation is expected to have high demand for new employment. Although it is a good starting point, other factors, such as separations should be considered in attempting to determine the availability of job opportunities in an occupation.

Size is a relative term assigned to the number of people employed in the occupation as reported in "Est. emp 1992." The designation is different for each county and is based on the size of the work force in the county. The number for Santa Clara County is converted to the relative term based on the following table:

- | | | |
|---------------------|---|---------------|
| • Small | = | 1,250 or less |
| • Medium | = | 1,251 - 2,450 |
| • Large | = | 2,451 - 5,225 |
| • Very Large | = | 5,226 or more |

The size of the occupation is important because it influences the availability of jobs. For instance, an occupation that is growing very slowly but is also very large could still be a good source of employment. Conversely, an occupation that is growing rapidly but is small in size

may not provide good job opportunities at this time for significant numbers of people.

Growth is also a relative term relating to the rate of growth projected for the occupation from 1992 to 1999 in Santa Clara County. The Occupational Forecast Tables provide a growth projection for each occupation. These projections are evaluated against data collected from employers, from trade associations, schools and industry analysis to provide a reasonable estimate of growth potential.

The average projected growth for Santa Clara County is 10.5% over the seven year period from 1992-1999. Ranges have been established around the 10.5% average as follows:

• Much Faster Than Average	=	15.8% and above
• Faster than Average	=	11.6% - 15.7%
• Average	=	9.5% - 11.5%
• Slower than Average	=	10% or less
• Remain Stable	=	0%
• Decline	=	less than 0%

Growth data can help determine if an occupation is likely to provide increasing or decreasing job opportunities in the future. Even in growing occupations, however, the supply of qualified people could exceed the demand for a variety of reasons, including small occupational size, large numbers of people who already meet the occupational requirements, and/or large numbers of people being trained for that occupation.

Separations project the number of people in Santa Clara County who will permanently leave the occupation. The source of separation is the Occupational Forecast Tables.

"Separations" combined with "growth" can provide an indication of the number of jobs that could be available in an occupation with low turnover. For example, an occupation with low turnover but high growth and separations could point the way to a good opportunity for entrance into an occupation generally difficult to enter.

Principal Employing Industries

This section provides a list of types of industries that employ people in the occupation. The list is ranked, using projected employment, from industries employing the largest number of people in the occupation in Santa Clara County. The titles are from the Standard Industrial

	<p>Classification system, as used in the 1992-1999 Occupational Forecast Tables.</p> <p><i>This information is helpful to job seekers and job developers by identifying industries most likely to provide employment in the occupation with number "1" providing the most employment. It is often recommended that job seekers contact employers within major employing industries in order to get more specific information for career planning.</i></p>
Job Skills	<p>This section provides a summary of employer requirements and preferences in relation to the occupation. It is divided into two categories: <i>Job-Specific Skills</i> and <i>Basic Skills</i>.</p> <p>This section describes the basic, physical, technical, personal and other skills which employers consider most important. All skills have been rated by employers on a scale of 0 to 3, with 0 meaning that the skill is "not important" to 3 meaning that the skill is "very important" for the job.</p> <p>Important Note: With the passage of the Americans With Disabilities Act in 1990, employers must determine the "essential functions" of a position. The designation of a skill as "very important" or "important" is based upon employer preference. These terms are in no way meant to determine which skills are "essential functions" of the position. Employers will have to make that designation for each occupation at their firm.</p> <p><i>It is also important to note that although employers report their preferences as to physical skills, the Act also states that "reasonable accommodation" must be made for applicants and employees who have a disability. For more information about the Americans With Disabilities Act, contact NOVA Bridge-to-Jobs (408) 730-7776.</i></p>
<i>Job-Specific Skills</i>	Based on the above criteria, this section identifies those skills/qualifications within the occupation which are desired by employers.
<i>Basic Skills</i>	Based on the above criteria, this section identifies general skills/qualifications desired by employers.
Education, Training and Experience	Employer or legal requirements and preferences regarding education and training for specific occupations are presented.
<i>Education and Training</i>	Education refers to academic education as provided in high schools and community colleges. Training generally refers to vocational training as provided by Regional Occupational

	<p>Programs, adult education, private vocational schools, state approved apprenticeship programs and community college vocational training programs. Some occupations have legal or voluntary licensing, registration, or certification requirements which stipulate training or proficiency tests. Details are provided where applicable.</p> <p><i>It should be noted that just meeting employer requirements may not be sufficient for employment. Often, the difference between obtaining or not obtaining employment for an inexperienced person is completion of the preferred levels of education and training. This is particularly true in occupations where supply exceeds demand and the inexperienced are competing with the experienced.</i></p>
Experience	<p>The amount of experience required by employers, and areas in which employers look for experience is noted in this section. If training is an acceptable substitute for work experience, that is also noted.</p> <p><i>This section provides a good indication of the degree of competition for jobs in the occupation. The more experience an employer requires, the stronger the competition and the harder it will be to enter the occupation with the proper qualifications but no experience.</i></p>
Other Information	<p>In this section, a variety of additional factors such as, The California Occupational Code, Occupational Access and Mobility, and Employer Screening Methods are considered. These factors are not always reviewed in each occupation since the data was not available or relevant.</p>
California Occupational Guide #	<p>This number refers to a series of detailed occupational descriptions prepared by the Labor Market Information Division of the Employment Development Department. These guides are updated regularly and provide information relevant to the State of California. Not all occupations had a corresponding guide at the time this document was printed but new occupations are regularly added.</p> <p><i>It is recommended that you refer to the Occupational Guides for more detailed information concerning the occupation.</i></p>
Occupational Access & Mobility	<p>This section shows the reader where employers go to find job candidates in the occupation and discuss upward mobility.</p> <p><i>Those occupations with employers indicating that they promote from within their own firms will be difficult to enter directly. It will be necessary to find out which entry level jobs with</i></p>

Screening Methods

the firm would ultimately lead to the desired occupation.

In addition, a majority of employers list the newspaper as a primary source of recruitment, however, while many companies post ads in the paper, most employees find their jobs through personal and professional networking contacts.

Ads are often placed to get a sense of the labor pool to fulfill company policy. This should not discourage the job seeker from reading the want ads, but some additional analysis may be required. For example, the want ads provide valuable information about who's hiring. If a company is hiring engineers this week, they will probably need the technicians to support them next week. Additionally, ads can be a great source of vocabulary for building a resume, providing the current terminology for the industry.

When job seekers use the newspaper as a source of job leads, they will need to do more to set themselves above the competition. For example, job seekers should be encouraged to find out who the hiring manager is, and to send their resume directly to him or her. Counselors should caution job seekers that the ads tend to be overwritten. If the applicant meets 70% of the requirements, they should apply.

This section notes any screening requirements that employers may have for job applicants including drug scans, Department of Motor Vehicles (DMV) checks, and/or physical exams. Any tools or other materials that new hires are expected to provide is also noted in this section.

AUTOMOTIVE MECHANICS

OES CODE: 853020

Automotive Mechanics adjust, repair, and overhaul automotive vehicles. They may be designated according to specialties, such as Brake Repairers, Transmission Mechanics, or Front-end Mechanics. It does not include Auto Body Repairers, Bus and Truck Mechanics, Diesel Engine Specialists, and Electrical Systems Specialists.



WAGES•WORK PATTERNS•BENEFITS

WAGES

	Union	Median	Non-Union	Median
Entry Level/No Experience:	\$ 12.00 – 12.00	\$ 12.00	\$ 7.00 – 13.00	\$ 11.00
Experienced/ New to Firm:	\$ 17.00 – 17.00	\$ 17.00	\$ 8.00 – 22.00	\$ 14.00
3+ Yrs. Experience with Firm:	\$ 22.50 – 23.00	\$ 22.75	\$ 11.00 – 25.00	\$ 21.88

WORK PATTERNS

Most Automotive Mechanics work full time averaging 40 hours per week. Some employees in this occupation are unionized.

BENEFITS

	Full Time		Full Time
Child Care	0%	Paid Sick Leave	57%
Dental Insurance	64%	Paid Vacation	93%
Life Insurance	36%	Retirement Plan	43%
Medical Insurance	86%	Vision Insurance	50%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers report it to be somewhat difficult finding applicants who are both fully qualified and experienced as well as qualified but inexperienced. Turnover accounted for most new job opportunities in the past year, however many also were a result of newly created positions. Most firms surveyed expect overall employment in this occupation to grow over the next three years.

SIZE AND GROWTH

	1992	1999	Change	Separations
Size:	Large	3,070	3,420	350
Growth:	Average			640

PRINCIPAL EMPLOYING INDUSTRIES

	Percent	SIC
1. New and Used Car Dealers	32%	5511
2. General Automotive Repair Shops	24%	7538
3. Gasoline Service Stations	12%	5541

JOB SKILLS

Job-Specific Skills:

Very Important: Ability to operate electronic automotive diagnostic equipment, ability to implement safe work practices, ability to repair brakes, ability to repair fuel injection systems.
Important: Ability to repair emission controls, ability to tune engines, ability to repair vehicle air conditioners, keyboarding skills, and computer skills.

Basic Skills:

Very Important: Basic math skills, oral communication skills, writing skills, ability to read and follow instructions. Ability to work independently as well as part of a team, ability to work under pressure, and attention to detail. Ability to lift at least 10 lbs.
Important: English grammar and spelling skills, ability to do strenuous, physically demanding work, and ability to lift at least 50 lbs.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most recently hired Automotive Mechanics have a high school diploma or its equivalent. Most employers require an auto certificate in an area of speciality like smog check, or a trade school certificate or apprenticeship.

Experience:

Many employers always require previous work experience, while most employers sometimes accept training as a substitute for such experience. Most employers require an average of 3 years of experience as a Mechanic.

OTHER INFORMATION

California Occupational Guide No.: 24

Occupational Access & Mobility : Most employers surveyed use newspaper ads to recruit for this occupation. Many employers also reported using employee referrals. Most employers surveyed promote Automotive Mechanics to higher level positions, such as Apprentice Mechanic, Lead Mechanic/Technician, or Service Manager.

Employer Screening Methods: Most employers use DMV checks, some use drug testing.

BUS AND TRUCK MECHANICS AND DIESEL ENGINE SPECIALISTS

OES CODE: 853110

Bus and Truck Mechanics and Diesel Engine Specialists repair and maintain the operating condition of trucks, buses, and all types of diesel engines. It includes mechanics working primarily with automobile diesel engines.



WAGES•WORK PATTERNS•BENEFITS

WAGES

	Union	Median	Non-Union	Median
Entry Level/No Experience:	\$ 9.50 – 14.97	\$ 11.71	\$ 7.00 – 10.00	\$ 7.50
Experienced/ New to Firm:	\$ 10.50 – 21.93	\$ 16.59	\$ 10.00 – 19.75	\$ 12.00
3+ Yrs. Experience with Firm:	\$ 13.00 – 21.93	\$ 18.90	\$ 12.00 – 25.00	\$ 19.66

WORK PATTERNS

Most Bus and Truck Mechanics and Diesel Engine Specialists work full time, averaging 40 hours per week. Most Bus and Truck Mechanics belong to a union.

BENEFITS

	Full Time		Full Time
Child Care	0%	Paid Sick Leave	63%
Dental Insurance	75%	Paid Vacation	94%
Life Insurance	50%	Retirement Plan	56%
Medical Insurance	100%	Vision Insurance	56%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers report it to be very difficult finding applicants who are fully qualified and experienced, and somewhat difficult finding applicants who are qualified but inexperienced. Turnover accounted for most new job opportunities in the past year. Contrary to the projections which indicate a much faster than average growth, most employers expect employment to remain stable for the next three years.

SIZE AND GROWTH

	1992	1999	Change	Separations
Size:	Small	810	940	130
Growth:	Much Faster than Average			

PRINCIPAL EMPLOYING INDUSTRIES

	Percent	SIC
1. Local Government	16%	9030
2. Trucking, Except Local	11%	4213
3. Elementary And Secondary Schools	9%	8211
4. New And Used Car Dealers	8%	5511

JOB SKILLS

Job-Specific Skills:

Very Important: Ability to repair diesel engines, ability to use hand tools, ability to implement safe work practices, knowledge of basic auto mechanics, knowledge of hydraulics, ability to operate electric testing equipment, ability to provide own hand tools.

Important: Shop math skills, computer skills, and ability to operate electronic automotive diagnostic equipment.

Basic Skills:

Very Important: Oral communication skills, ability to read and follow instructions, ability to work as part of a team, ability to work under pressure, attention to detail, and ability to lift at least 10 lbs.

Important: Basic math skills, ability to do strenuous, physically demanding work, ability to work independently, ability to lift at least 50 lbs., and ability to stand continuously for 2 or more hours.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most Bus and Truck Mechanics and Diesel Engine Specialists have a high school diploma or equivalent. To enter a union apprenticeship program, one must have a high school diploma or its equivalent and be at least 18 years old. Apprenticeship programs usually last four years.

Experience:

Many employers usually or always require previous work experience and sometimes accept training as a substitute. Most employers require an average of 3 years of experience as a Mechanic.

OTHER INFORMATION

California Occupational Guide No.: 251

Occupational Access & Mobility: Most employers use newspaper ads and employee referrals to recruit for this occupation, some also hire unsolicited applicants and use union hall referrals. Most employers promote to positions such as Journeyman to Foreman or to Shop Supervisor.

Employer Screening Methods: Most employers use drug testing, DMV checks, and medical physicals.

COMPLIANCE OFFICERS AND ENFORCEMENT INSPECTORS - EXCEPT CONSTRUCTION OES CODE: 219110

Compliance Officers and Enforcement Inspectors enforce adherence to policies, procedures, or regulations and advise on standards. They may be employed in the public or private sector and inspect and enforce regulations on such matters as health, safety, food, immigration, licensing, or interstate commerce. It does not include construction and building inspectors.

WAGES•WORK PATTERNS•BENEFITS

WAGES

	Union	Median	Non-Union	Median
Entry Level/No Experience:	Most employers do not hire at this level			
Experienced/ New to Firm:	\$ 12.83 – 30.69	\$ 18.42	\$ 9.50 – 22.75	\$ 16.21
3+ Yrs. Experience with Firm:	\$ 15.27 – 35.48	\$ 20.99	\$ 13.00 – 27.50	\$ 18.63

WORK PATTERNS

Most Compliance Officers work full time averaging 40 hours per week. Most workers in this occupation belong to a Union.

BENEFITS

	Full Time		Full Time
Child Care	0%	Paid Sick Leave	100%
Dental Insurance	100%	Paid Vacation	100%
Life Insurance	100%	Retirement Plan	100%
Medical Insurance	100%	Vision Insurance	87%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers report it is a little difficult finding applicants who are qualified and experienced, and somewhat difficult finding those who are qualified but inexperienced. New positions accounted for most new job opportunities in the past year, however many were a result of turnover. Contrary to the projections, which predicts much faster than average growth, most employers report employment in this occupation to remain stable in the next three years, though many expect it to grow.

SIZE AND GROWTH

		1992	1999	Change	Separations
Size:	Small	560	650	90	70
Growth:	Much Faster than Average				

PRINCIPAL EMPLOYING INDUSTRIES

	Percent	SIC
1. State Government	36%	9020
2. Federal Government	22%	9010
3. Labor Organizations	18%	8631
4. Local Government	17%	9030

JOB SKILLS

Job-Specific Skills:

Very Important: Ability to conduct inspections, public contact skills, report writing skills, understanding of fire safety and prevention practices, ability to interview others for information, problem solving skills, analytical skills, ability to handle crisis situations, and adaptable.

Important: Spreadsheet, word processing and database application skills.

Basic Skills:

Very Important: Basic math skills, writing and oral communication skills, ability to read and follow instructions, English grammar and spelling skills. Ability to work independently as well as part of a team, ability to work under pressure, and attention to detail.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Many recently hired Compliance Officers have an A.A. degree or a Bachelor's degree. Some employers require training in safety inspection.

Experience:

Most employers always require previous work experience and never accept training as a substitute. Most employers require an average of 2 years of experience in safety inspection, code enforcement, quality control, hazardous material, and/or public relations.

OTHER INFORMATION

California Occupational Guide No.: 2000 A (EPA Compliance Jobs - State, Local, and Private Sector)

Occupational Access & Mobility: Many employers use newspaper ads, the Employment Development Department, and in-house promotions or transfers to recruit for this occupation. Most employers surveyed promote Compliance Officers to senior level supervisory positions.

Employer Screening Methods: Most employers use DMV checks, medical physicals, reading, math aptitude assessment testing, and drug testing.

COMPUTER AIDED AUDIO / VISUAL ENGINEERS

DOT CODE: 030.064-999

Computer Aided Audio / Visual Engineers are responsible for selecting, recording, editing, and digitizing sound and video components of a project for conversion to a digital format for playback by a computer or other electronic media. They can be involved in shooting a new video, acquiring existing video, music, voice-over, and sound and video effects. Responsibilities may include pre-production and production components, such as storyboards, lighting and props, and coordinating arrangements with audio engineers, sound effects specialists, digital sound processors, musicians, and voice/graphic artists.



WAGES•WORK PATTERNS•BENEFITS

WAGES

	Range	Median
Entry Level/No Experience:	\$ 10.00 – 26.25	\$ 10.75
Experienced/ New to Firm:	\$ 9.50 – 50.25	\$ 15.00
3+ Yrs. Experience with Firm:	\$ 12.00 – 55.25	\$ 21.58

WORK PATTERNS

Most Computer Aided Audio/Visual Engineers work full time, averaging 43 hours per week.

BENEFITS

	Full Time		Full Time
Child Care	21%	Paid Sick Leave	86%
Dental Insurance	79%	Paid Vacation	100 %
Life Insurance	57%	Retirement Plan	43 %
Medical Insurance	93%	Vision Insurance	57%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers surveyed report it is somewhat difficult finding fully experienced and qualified applicants, but a little difficult finding applicants who are qualified but inexperienced. New positions accounted for most new job opportunities in the past year. Most firms expect overall employment in this occupation to grow over the next three years.

SIZE AND GROWTH

	1992	1999	Change	Separations
Size:	NOT AVAILABLE			
Growth:	NOT AVAILABLE			

PRINCIPAL EMPLOYING INDUSTRIES

NOT AVAILABLE

JOB SKILLS

Job-Specific Skills:

Very Important: Ability to incorporate multimedia into current applications, ability to digitize images and create sound tracks, and digital movie editing and special effects skills.

Important: Adobe Aftereffects, Sound Edit Pro, Macintosh, Windows NT operating systems, digital art capability, and nonlinear editing skills.

Basic Skills:

Very Important: Oral communication skills, ability to read and follow instructions, and English grammar and spelling skills. Ability to work independently as well as part of a team, ability to work under pressure, and attention to detail.

Important: Keyboarding skills, and ability to sit continuously for 2 or more hours.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most recently hired Audio/Visual Engineers have a Bachelor's degree.

Experience:

Most employers always require previous experience and will sometimes accept training as a substitute. Most employers require an average of 18 months of experience in video / multimedia design, computerized audio processing or sound design.

OTHER INFORMATION

California Occupational Guide No.: Not Available

Occupational Access & Mobility:

Most employers recruit into this occupation via employee referrals, private school referrals, public school or program referrals, and other means such as the internet. Most employers surveyed promote to higher level positions such as Project Leader/Manager.

COMPUTER ANIMATORS

DOT CODE: 030.064-998

Computer Animators create two and three dimensional images that show objects in motion or illustrate a process. These images convey or enhance the project's message. Images are created with modeling and animation software. They may scan, edit, add color, and texture, and add motion to images with the aid of a computer.

WAGES•WORK PATTERNS•BENEFITS

WAGES

	Range	Median
Entry Level/No Experience:	\$ 9.50 –14.50	\$ 10.46
Experienced/ New to Firm:	\$ 8.00 – 21.25	\$ 16.20
3+ Yrs. Experience with Firm:	\$10.75 – 34.75	\$ 19.16

WORK PATTERNS

Most Computer Animators work full time averaging 46 hours per week.

BENEFITS

	Full Time		Full Time
Child Care	13%	Paid Sick Leave	87%
Dental Insurance	87%	Paid Vacation	100%
Life Insurance	53%	Retirement Plan	67 %
Medical Insurance	100%	Vision Insurance	53%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Most employers report it is somewhat difficult finding applicants who are both fully qualified and experienced, as well as qualified but inexperienced. Newly created positions accounted for most new job opportunities in the past year. Most firms expect overall employment in this occupation to grow over the next three years.

SIZE AND GROWTH

	1992	1999	Change	Separations
Size:	NOT AVAILABLE			
Growth:	NOT AVAILABLE			

PRINCIPAL EMPLOYING INDUSTRIES

NOT AVAILABLE

JOB SKILLS

Job-Specific Skills:

Very Important: Drawing skills, animation skills, and creating computer graphics for video and multimedia.

Important: Digital assembly (integrating video, text, and/or content), artistic creativity, communication / story telling skills, Photoshop skills, and computer software application skills including, word processing, spreadsheet, database and desktop publishing.

Basic Skills:

Very Important: Oral communication skills, ability to read and follow instructions, ability to work independently as well as part of a team, ability to work under pressure, and attention to detail.

Important: Keyboarding skills, basic math skills, and English grammar and spelling skills.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most recently hired Computer Animators have a Bachelor's degree in Fine Arts. Employers also require additional training in specific software packages in multimedia, animation, and graphic design.

Experience:

Most employers surveyed always require previous work experience and are sometimes willing to substitute training for such experience. Employers require an average of 3 year of experience in animation, graphic arts and/or illustration.

OTHER INFORMATION

California Occupational Guide No.: Not Available

Occupational Access & Mobility:

Most employers use the internet to recruit for this occupation. Many employers report using employee referrals, newspaper ads, and private school referrals. Most employers report promoting to higher level positions such as, Technical Manager, or Production Director.

DENTAL ASSISTANTS

OES CODE: 660020

Dental Assistants assist the dentist at the chair by preparing patients and equipment, keeping records, and performing related duties as required.

WAGES•WORK PATTERNS•BENEFITS

WAGES

	Range	Median
Entry Level/No Experience:	\$ 7.00 – 14.50	\$ 11.50
Experienced/ New to Firm:	\$ 9.00 – 17.25	\$ 13.00
3+ Yrs. Experience with Firm:	\$ 10.00 – 19.00	\$ 16.00

WORK PATTERNS

Most Dental Assistants work full time, averaging 39 hours per week. Some also work part time, averaging 18 hours per week.

BENEFITS

	Full Time	Part Time		Full Time	Part Time
Child Care	6%	0%	Paid Sick Leave	63%	13%
Dental Insurance	69%	6%	Paid Vacation	100 %	13%
Life Insurance	38%	6%	Retirement Plan	75%	6%
Medical Insurance	88%	6%	Vision Insurance	0%	0%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Most employers surveyed report it is somewhat difficult finding fully experienced and qualified applicants, and a little difficult finding qualified but inexperienced candidates. Turnover accounted for most new job opportunities in the past year. Most firms expect overall employment to remain stable over the next three years (contrary to projections which indicate a much faster than average growth), but many employers do report growth.

SIZE AND GROWTH

		1992	1999	Change	Separations
Size:	Medium	1,570	2,010	440	310
Growth:	Much Faster than Average				

PRINCIPAL EMPLOYING INDUSTRIES

	Percent	SIC
1. Offices and Clinics of Dentists	98%	8021

JOB SKILLS

Job-Specific Skills:

Very Important: Possession of a Radiation Safety Certificate, knowledge of dental materials, ability to perform or assist with dental procedures, record keeping skills, public contact skills, and possession of a Registered Dental Assistant (RDA) Certificate.

Important: Completion of courses in biological sciences, understanding of coronal polishing, and word processing skills.

Basic Skills:

Very Important: Ability to read and follow instructions, oral communication skills, English grammar and spelling skills. Ability to work as part of a team, and attention to detail.

Important: Writing skills, ability to work independently, and ability to work under pressure.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Many recently hired Dental Assistants have some college but no degree. Most employers require completion of an accredited program in dental assisting to be a Registered Dental Assistant (RDA).

Experience:

Many employers usually require previous work experience and are sometimes willing to substitute training for such experience. Many employers require an average of 12 months of work experience as a RDA.

OTHER INFORMATION

California Occupational Guide No.: 27

Occupational Access & Mobility:

Most employers use newspaper ads and public school or program referrals to recruit into this occupation. Most employers surveyed said that they do not promote Dental Assistants to higher positions, however some promote to higher positions in the office or to a Hygienist with additional schooling.

ELECTRICAL AND ELECTRONIC ENGINEERING TECHNICIANS AND TECHNOLOGISTS

OES CODE: 225050

Electrical and Electronic Engineering Technicians and Technologists apply electrical and electronic theory and related knowledge to design, build, test, and modify developmental, experimental, or production electrical equipment in industrial or commercial plants for subsequent use by engineering personnel in making engineering design and evaluation decisions. It does not include workers who only repair electronic equipment.

WAGES•WORK PATTERNS•BENEFITS

WAGES

	Range	Median
Entry Level/No Experience:	\$ 8.00 – 11.00	\$ 9.00
Experienced/ New to Firm:	\$7.00 – 23.00	\$ 10.00
3+ Yrs. Experience with Firm:	\$ 9.00 – 24.75	\$ 13.00

WORK PATTERNS

Most Electrical and Electronic Engineering Technicians and Technologists work full time averaging 41 hours per week, some also work on a temporary / on call basis.

BENEFITS

	Full Time		Full Time
Child Care	6%	Paid Sick Leave	100%
Dental Insurance	94%	Paid Vacation	100%
Life Insurance	82%	Retirement Plan	47%
Medical Insurance	94%	Vision Insurance	71%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers report it is a little difficult finding applicants who are both fully qualified and experienced as well as qualified but inexperienced. Many new job opportunities in the past year resulted from turnover and new positions created. Most employers surveyed expect overall employment in this occupation to grow over the next three years (contrary to projections which indicates a slower than average growth).

SIZE AND GROWTH

		1992	1999	Change	Separations
Size:	Very Large	12,970	13,800	830	1,030
Growth:	Slower than Average				

PRINCIPAL EMPLOYING INDUSTRIES

	Percent	SIC
1. Semiconductor and Related Devices	19%	3674
2. Electronic Computers	14 %	3571

JOB SKILLS

Job-Specific Skills:

Very Important: Ability to operate electric and electronic test equipment, knowledge of electronic circuitry, understanding of electrical technology, understanding of circuit design, understanding of basic analog theory, understanding of basic digital theory, and ability to read working drawings.

Important: Ability to read schematics, knowledge of Statistical Process Control (SPC), and Knowledge of Total Quality Management (TQM).

Basic Skills:

Very Important: Basic math skills, ability to read and follow instructions, ability to work as part of a team, and attention to detail.

Important: Advanced math skills, keyboarding skills, writing skills, oral communication skills, English grammar and spelling skills, and ability to work under pressure.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most recently hired Electrical and Electronic Engineering Technicians and Technologists have an A.A. degree.

Experience:

Most employers are never willing to substitute training for work experience. Most employers require an average of 2 years of work experience as an Electronic Technician.

OTHER INFORMATION

California Occupational Guide No.: 60

Occupational Access & Mobility:

Most employers use newspaper ads, employee referrals, private employment agencies, and other sources such as the internet to recruit for this occupation. Most employers surveyed promote Electrical and Electronic Engineering Technicians and Technologists to higher level positions within the department.

ELECTRICAL AND ELECTRONIC ENGINEERS

OES CODE: 221260

Electrical and Electronic Engineers design, develop, test and supervise the manufacturing and installation of electrical and electronic equipment, components or systems, computers and related equipment and systems for commercial, industrial, military or scientific use. It does not include Sales Engineers.



WAGES•WORK PATTERNS•BENEFITS

WAGES

	Range	Median
Entry Level/No Experience:	\$ 15.25 – 19.25	\$ 18.70
Experienced/ New to Firm:	\$ 15.00 – 40.00	\$ 23.01
3+ Yrs. Experience with Firm:	\$ 19.25 – 55.00	\$ 30.69

WORK PATTERNS

Most Electrical and Electronic Engineers work full time averaging 43 hours per week.

BENEFITS

	Full Time		Full Time
Child Care	18%	Paid Sick Leave	100%
Dental Insurance	94%	Paid Vacation	100%
Life Insurance	94%	Retirement Plan	59%
Medical Insurance	94%	Vision Insurance	88%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers report it to be somewhat difficult finding both fully qualified and experienced candidates as well as qualified but inexperienced applicants. New positions accounted for most new job opportunities created in the past year, some were due to turnover. Most employers surveyed report employment in this occupation to grow over the next three years (contrary to the projections which indicates a slower than average growth).

SIZE AND GROWTH

		1992	1999	Change	Separations
Size:	Very Large	15,710	16,980	1,270	2,330
Growth:	Slower than Average				

PRINCIPAL EMPLOYING INDUSTRIES

	Percent	SIC
1. Electronic Computers	22%	3571
2. Semiconductor and Related Devices	14 %	3674
3. Commercial Physical Research	10%	8731

JOB SKILLS

Job-Specific Skills:

Very Important: Ability to use engineering applications software, knowledge of microcomputer hardware and operating systems, knowledge of UNIX operating system, ability to use C, C++ programming, digital circuitry design skills, and Computer Assisted Design (CAD) skills.

Important: Ability to write technical material, ability to design analog circuitry, and scientific programming skills, spreadsheet, word processing, and database applications skills.

Basic Skills:

Very Important: Advanced math skills, keyboarding skills, writing skills, oral communication skills, ability to read and follow instructions, English grammar and spelling skills. Ability to work independently as well as part of a team, ability to work under pressure and attention to detail.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most Electrical and Electronic Engineers have a Bachelor's degree.

Experience:

Some employers always or usually require previous work experience. Most employers surveyed are never willing to substitute training for work experience. Most employers require an average of 3 years of work experience in the field of engineering.

OTHER INFORMATION

California Occupational Guide No.: 12

Occupational Access & Mobility: Most employers use employee referrals, newspaper ads, private employment agencies, in-house promotions or transfers, and other sources such as the internet to recruit for this occupation. Most employers promote Electrical/Electronic Engineers to higher level positions such as Supervisor or Manager.

FARM EQUIPMENT OPERATORS

OES CODE: 790210

Farm Equipment Operators drive and control farm equipment to till soil and to plant, cultivate, and harvest crops.



WAGES•WORK PATTERNS•BENEFITS

WAGES

	Range	Median
Entry Level/No Experience:	\$ 4.50 – 6.50	\$ 5.00
Experienced/ New to Firm:	\$ 5.00 – 8.00	\$ 6.75
3+ Yrs. Experience with Firm:	\$ 6.50 – 14.00	\$ 8.00

WORK PATTERNS

Most Farm Equipment Operators work full time averaging 48 hours per week, some also work on a seasonal basis. The hours of work vary a great deal. During planting and harvesting season, workers are often in the fields from sunup until late at night.

BENEFITS

	Full Time		Full Time
Child Care	0%	Paid Sick Leave	13%
Dental Insurance	100%	Paid Vacation	25%
Life Insurance	0%	Retirement Plan	13%
Medical Insurance	100%	Vision Insurance	13%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers report it is a little difficult finding applicants who are fully qualified and experienced and not difficult finding applicants who are qualified but inexperienced. Turnover and temporary positions accounted for many new jobs created in the past year. Most employers expect overall employment to remain stable over the next three years.

SIZE AND GROWTH

	1992	1999	Change	Separations
Size:	NOT AVAILABLE			
Growth:	NOT AVAILABLE			

PRINCIPAL EMPLOYING INDUSTRIES

NOT AVAILABLE

JOB SKILLS

Job-Specific Skills:

Very Important: Possess mechanical aptitude and good vision.

Important: Ability to do maintenance and minor repairs and ability to use hand tools.

Basic Skills:

Very Important: Ability to work independently as well as part of a team, attention to detail, and oral communication skills.

Important: Ability to read and follow instructions, ability to work under pressure, ability to lift at least 10 lbs., and ability to sit continuously for 2 or more hours.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most Farm Equipment Operators have a high school diploma or its equivalent. Employers report learning this job is through on-the-job training.

Experience:

Some employers sometimes require previous work experience and many employers never accept training as a substitute. Most employers require experience in areas such as tractor operation, harvesting, and knowledge of farm equipment and its operation.

OTHER INFORMATION

California Occupational Guide No.: 225

Occupational Access & Mobility:

Most employers use employee referrals to hire for this occupation. Most employers surveyed do not promote Farm Equipment Operators, however some employers promote them to Foreman or Supervisor.

INDUSTRIAL ENGINEERS - EXCEPT SAFETY

OES CODE: 221280

Industrial Engineers perform a variety of engineering work in planning and overseeing the utilization of production facilities and personnel in department or other subdivision of industrial establishment. They plan equipment layout, control, inventory control, and production record systems. It does not include Industrial Product Safety Engineers.

WAGES•WORK PATTERNS•BENEFITS

WAGES

	Range	Median
Entry Level/No Experience:	\$ 12.75 – 23.00	\$ 19.66
Experienced/ New to Firm:	\$ 14.50 – 27.50	\$ 21.91
3+ Yrs. Experience with Firm:	\$ 19.25 – 40.00	\$ 28.77

WORK PATTERNS

Most Industrial Engineers work full time averaging 40 hours per week.

BENEFITS

	Full Time		Full Time
Child Care	7%	Paid Sick Leave	93%
Dental Insurance	100%	Paid Vacation	100%
Life Insurance	100%	Retirement Plan	67 %
Medical Insurance	100%	Vision Insurance	93%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers surveyed report it is somewhat difficult finding candidates who are fully qualified and experienced and a little difficult finding applicants who are qualified but inexperienced. New positions accounted for most new job opportunities created in the past year. Some were due to turnover. Most employers surveyed expect overall employment in this occupation to grow over the next three years (contrary to the projections which indicates a slow decline), although many report it to remain stable.

SIZE AND GROWTH

		1992	1999	Change	Separations
Size:	Very Large	6,370	5,400	-970	1,100
Growth:	Slow Decline				

PRINCIPAL EMPLOYING INDUSTRIES

	Percent	SIC
1. Guided Missiles And Space Vehicles	33%	3761
2. Semiconductor and Related Devices	26%	3674
3. Instruments to Measure Electricity	16%	3825

JOB SKILLS

Job-Specific Skills:

Very Important: Ability to implement plans and recommendations, knowledge of production equipment layout, problem solving skills, analytical skills, ability to work with different levels of management, ability to improve worker efficiency, ability to plan and organize work of others, knowledge of Total Quality Management (TQM), ability to demonstrate knowledge of specific products, knowledge of Statistical Process Control (SPC), and ability to develop better management systems.

Important: Understanding of inventory techniques, and word processing and spreadsheet applications.

Basic Skills:

Very Important: Advanced math skills, keyboarding skills, writing skills, oral communication skills, ability to read and follow instructions, English grammar and spelling skills. Ability to work independently as well as part of a team, ability to work under pressure, and attention to detail.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most recently hired Industrial Engineers have a Bachelor's degree.

Experience:

Many employers usually require previous work experience. Most employers are never willing to substitute training for work experience. Most employers require an average of 3 years of work experience in the field of industrial engineering.

OTHER INFORMATION

California Occupational Guide No.: 3

Occupational Access & Mobility:

Most employers use newspaper ads to recruit for this occupation. Many also use employee referrals, public school or program referrals, private school referrals, and other sources such as the internet. Most employers surveyed promote Industrial Engineers to higher level positions such as Project Lead, Supervisor or Manager.

INTEGRATED CIRCUIT FABRICATORS / OPERATORS

DOT CODE: 590.684-999

Integrated Circuit Fabricators / Operators perform any combination of following tasks to fabricate integrated circuits on semiconductor wafers according to written specifications. They inspect photo masks and semiconductor wafers for defects, using microscope, magnifying lens, or computer-aided inspection equipment. They alter electrical nature of wafer layers according to photo mask patterns to form integrated circuits on wafers, using equipment and processes including, photolithography, acid baths, diffusion furnaces, ion implant equipment, and metallization equipment. They inspect and measure circuitry for conformance to pattern specifications, and test functioning of circuitry.

WAGES•WORK PATTERNS•BENEFITS

WAGES

	Range	Median
Entry Level/No Experience:	\$ 7.00 – 10.25	\$ 7.95
Experienced/ New to Firm:	\$ 8.00 – 15.25	\$ 11.83
3+ Yrs. Experience with Firm:	\$ 11.00 – 20.50	\$ 14.00

WORK PATTERNS

Most Integrated Circuit Fabricators/Operators work full time averaging 40 hours per week.

BENEFITS

	Full Time		Full Time
Child Care	13%	Paid Sick Leave	93%
Dental Insurance	100%	Paid Vacation	100%
Life Insurance	100%	Retirement Plan	80%
Medical Insurance	100%	Vision Insurance	87%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers report it is a little difficult finding applicants who are fully qualified and experienced and not difficult finding those who are qualified but inexperienced. Most new job opportunities in the past year resulted from new positions, many were due to turnover. Most employers expect overall employment in this occupation to grow over the next three years (contrary to projections which indicates a decline), however many employers report it to remain stable.

*SIZE AND GROWTH

		1992	1999	Change	Separations
Size:	Very Large	5,500	5,320	-180	800
Growth:	Decline				

*PRINCIPAL EMPLOYING INDUSTRIES

	Percent	SIC
1. Semiconductor and Related Services	76%	3674
2. Electronic Components	9%	3679

*Projection numbers for OES code 929020 (Electronic Semiconductor Processors) are used.

JOB SKILLS

Job-Specific Skills:

Very Important: Ability to follow written specifications and understanding of clean room techniques.

Important: Ability to inspect circuitry for conformance to specifications, ability to follow the photolithography process, ability to operate metallization equipment, ability to operate ion implant process, ability to use computer aided inspection equipment, ability to use acid bath equipment, ability to use diffusion furnaces, and understanding of statistical process control.

Basic Skills:

Very Important: Basic math skills, ability to read and follow instructions, ability to work independently as well as part of a team, ability to work under pressure, and attention to detail

Important: Ability to stand continuously for 2 or more hours and oral communication skills.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most recent hires in this occupation have a high school diploma or its equivalent.

Experience:

Most employers surveyed usually require previous work experience and are sometimes willing to substitute training for work experience. Most employers require an average of 2 years of work experience in any area of fab operation.

OTHER INFORMATION

California Occupational Guide No.: 496

Occupational Access & Mobility: Most employers use employee referrals and newspaper ads to recruit for this occupation. Most employers promote Integrated Circuit Fabricators/Operators to higher level positions such as, Lead Operator, or Technician.

INTEGRATED CIRCUIT LAYOUT DESIGNERS

DOT CODE: 003.261-999

Integrated Circuit Layout Designers design layout for integrated circuits (IC), according to engineering specifications, using computer-assisted design (CAD) equipment and software, and utilize knowledge of electronics, drafting, and IC design rules (standard IC manufacturing process requirements). They review and analyze engineering design schematics and supporting documents. They enter engineering specifications into CAD equipment and compose, redesign and modify configurations on equipment display screen of IC logic elements for all IC layers, using keyboard, digitizing work aids, and / or engineering design schematics.

WAGES•WORK PATTERNS•BENEFITS

WAGES

	Range	Median
Entry Level/No Experience:	\$ 12.50 – 23.00	\$ 14.19
Experienced/ New to Firm:	\$ 14.50 – 28.75	\$ 19.18
3+ Yrs. Experience with Firm:	\$ 18.00 – 38.25	\$ 26.37

WORK PATTERNS

Most Integrated Circuit Layout Designers work full time averaging 40 hours per week.

BENEFITS

	Full Time		Full Time
Child Care	6%	Paid Sick Leave	94%
Dental Insurance	100%	Paid Vacation	100%
Life Insurance	100%	Retirement Plan	69%
Medical Insurance	100%	Vision Insurance	88%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers report it is somewhat difficult finding fully qualified and experienced applicants but a little difficult finding qualified but inexperienced candidates. Most new job opportunities in the past year resulted from turnover, many were new positions. Many employers surveyed report employment in this occupation to grow over the next three years.

SIZE AND GROWTH

	1992	1999	Change	Separations
Size:	NOT AVAILABLE			
Growth:	NOT AVAILABLE			

PRINCIPAL EMPLOYING INDUSTRIES

NOT AVAILABLE

JOB SKILLS

Job-Specific Skills:

Very Important: Ability to use CAD software, knowledge of electronics, knowledge of Integrated Circuit design, ability to review engineering design schematics, knowledge of digital and analog design theory, understanding of C-MOS design rules, and ability to do mask layout.

Important: Knowledge of drafting, ability to analyze engineering design schematics, ability to compose, redesign and modify IC design elements, and understanding of bi-polar design rules.

Basic Skills:

Very Important: Advanced math skills, keyboarding skills, oral communication skills, ability to read and follow instructions, ability to work independently as well as part of a team, ability to work under pressure, and attention to detail.

Important: Writing skills, English grammar and spelling skills, and ability to sit continuously for 2 or more hours.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most recently hired Integrated Circuit Layout Designers have an A.S. degree. Employers require training in CAD.

Experience:

Most employers usually require work experience. Many employers never or sometimes accept training as a substitute. Most employers require an average of 3 years of experience in the field of layout or mask design.

OTHER INFORMATION

California Occupational Guide No.: Not Available

Occupational Access & Mobility:

Most employers use employee referrals and newspaper ads to recruit for this occupation. Many also use other sources such as the internet and job fairs. Most employers promote Integrated Circuit Layout Designers to positions such as Design Engineer with completion of an Electrical Engineering degree, or Supervisory or Management positions.

INTERNET SERVER DESIGNERS AND ADMINISTRATORS (WEBMASTERS)

DOT CODE: 031.064-999

Internet Server Designers and Administrators are responsible for creating the computer driven interface environment, and therefore, the way in which the user interfaces with the product. Designers not only develop the desktop icon and other visual symbols and cues, but also the parts of the environment that the user experiences with his or her other senses, including what the user can hear and touch. Internet Administrators use concepts and principles of Graphical User Interface (GUI), various popular operating systems (e.g. UNIX), Common Gateway Interface (CGI) languages such as PERL, C++, Hypertext Mark-Up Language (HTML), in addition to knowledge of graphic design, desktop publishing, and database software.

WAGES•WORK PATTERNS•BENEFITS

WAGES

	Range	Median
Entry Level/No Experience:	\$ 8.00 – 26.25	\$ 11.14
Experienced/ New to Firm:	\$ 10.00 – 98.25	\$ 19.18
3+ Yrs. Experience with Firm:	\$ 15.00 – 103.00	\$ 26.85

WORK PATTERNS

Most Internet Server Designers and Administrators work full time, averaging 41 hours a week. Individuals in this occupation can work on a contract basis with companies, and could work from home.

BENEFITS

	Full Time		Full Time
Child Care	25%	Paid Sick Leave	92%
Dental Insurance	92%	Paid Vacation	83%
Life Insurance	83%	Retirement Plan	50%
Medical Insurance	100%	Vision Insurance	75%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers surveyed report it is somewhat difficult finding both fully qualified applicants who are experienced as well as those who are inexperienced. New positions accounted for most new job opportunities in the past year. Most firms expect overall employment in this occupation to grow over the next three years.

SIZE AND GROWTH

	1992	1999	Change	Separations
Size:	NOT AVAILABLE			
Growth:	NOT AVAILABLE			

PRINCIPAL EMPLOYING INDUSTRIES

NOT AVAILABLE

JOB SKILLS

Job-Specific Skills:

Very Important: Ability to create Web pages using JAVA, HTML, and VRML, ability to use various database applications, computer graphic design skills, understanding of various operating systems (e.g. UNIX), ability to use various CGI languages (e.g. C, C++, and PERL), ability to develop various electronic and database linkages, and file management skills.

Important: Ability to demonstrate a portfolio of previous assignments, and spreadsheet, word processing, and desktop publishing skills.

Basic Skills:

Very Important: Keyboarding skills, oral communication skills, ability to read and follow instructions, English grammar and spelling skills. Ability to work independently as well as part of a team, ability to work under pressure, attention to detail, and ability to sit continuously for 2 or more hours.

Important: Basic math skills, and writing skills.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most recently hired Internet Server Designers and Administrators have a Bachelor's degree. Some employers require training or experience in desktop publishing applications.

Experience:

Most employers always require previous work experience and will sometimes accept training as a substitute for experience. Most employers require an average of 2 years of experience in the areas of programming, desktop publishing or web design.

OTHER INFORMATION

California Occupational Guide No.: 559

Occupational Access & Mobility:

Most employers recruit for this occupation via word of mouth or internet postings. Many employers will use employee referrals and newspaper ads for their recruitment efforts. Most employers promote to higher level positions such as in marketing and project management.

LIBRARIANS - PROFESSIONAL

OES CODE: 315020

Librarians, Professional, include persons concerned with administering libraries and performing related library services including selecting, acquiring, cataloging, classifying, circulating, and maintaining library materials or furnishing references, bibliographies, and reader's advisory services. They may select music, films, or other audiovisual material for subject matter of program.

WAGES•WORK PATTERNS•BENEFITS

WAGES

	Union	Median	Non-Union	Median
Entry Level/No Experience:	\$ 15.09 – 18.06	\$ 16.99	\$ 12.50 – 16.50	\$ 14.86
Experienced/ New to Firm:	\$ 15.26 – 20.39	\$ 18.14	\$ 13.75 – 21.50	\$ 15.40
3+ Yrs. Experience with Firm:	\$ 19.08 – 25.94	\$ 22.71	\$ 17.25 – 33.50	\$ 19.18

WORK PATTERNS

Most Librarians work full time averaging 40 hours per week, some work part time averaging 20 hours per week. Some Librarians belong to a union.

BENEFITS

	Full Time	Part Time		Full Time	Part Time
Child Care	13%	7%	Paid Sick Leave	100%	33%
Dental Insurance	100%	33%	Paid Vacation	100%	33%
Life Insurance	80%	20%	Retirement Plan	93%	33%
Medical Insurance	100%	33%	Vision Insurance	80%	20%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers report it is a little difficult finding applicants who are both fully qualified and experienced as well as those who are qualified but inexperienced. Many of the new job opportunities in the past year resulted from temporary positions, some were due to turnover and new positions. Most employers expect overall employment in this occupation to remain stable over the next three years (contrary to projections which indicate a slower than average growth rate).

SIZE AND GROWTH

		1992	1999	Change	Separations
Size:	Small	600	630	30	80
Growth:	Slower than Average				

PRINCIPAL EMPLOYING INDUSTRIES

	Percent	SIC
1. Local Government	34%	9030
2. Colleges and Universities	31%	8221
3. Elementary and Secondary Schools	14%	8211

JOB SKILLS

Job-Specific Skills:

Very Important: Ability to organize, catalog and disseminate information, ability to read and comprehend information quickly, public contact skills, ability to manage multiple priorities, ability to manage unexpected situations or circumstances, ability to use computerized reference material, ability to use automated information retrieval system, and ability to classify publications under the Library of Congress.

Important: Ability to classify publications under the Dewey Decimal System, and ability to plan and organize the work of others, ability to manage an activity or department, and word processing and database application skills.

Basic Skills:

Very Important: Basic math skills, writing skills, oral communication skills, ability to read and follow instructions, English grammar and spelling skills. Ability to work independently as well as part of a team, ability to work under pressure, attention to detail, and ability to sit for 2 or more hours.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most recently hired Librarians have done graduate study. Most employers prefer a Master's degree in Library Science. Librarians employed by public schools need a library services credential. Requirements for the credential include a valid teaching credential and completion of a program of librarianship approved by the State Commission for Teacher Preparation and Licensing.

Experience:

Most employers surveyed always require previous work experience. Many employers are never willing to substitute training for work experience. Most employers require an average of 3 years of experience as a Librarian.

OTHER INFORMATION

California Occupational Guide No.: 154

Occupational Access & Mobility:

Most employers use newspaper ads and other sources like publications to recruit for this occupation. Many use in-house promotions or transfers and employee referrals. Many employers promote Librarians to administrative positions or to more specialized work. Promotions usually come with the acquisition of experience and administrative skills, knowledge of automated systems and additional training. Eligibility for promotion in civil service is based on experience, and passing written and oral tests for advanced positions.

MARKETING, ADVERTISING, AND PUBLIC RELATIONS MANAGERS

OES CODE: 130110

Marketing, Advertising, and Public Relations Managers formulate marketing policies, direct sales activities, and plan, organize, and direct advertising and public relations activities for a department, an entire organization, or on an account basis.

WAGES•WORK PATTERNS•BENEFITS

WAGES

	Range	Median
Entry Level/No Experience:	<i>Most Employers do not hire at this level</i>	
Experienced/ New to Firm:	\$ 13.50 – 42.25	\$ 17.05
3+ Yrs. Experience with Firm:	\$ 17.25– 49.75	\$ 22.43

WORK PATTERNS

Most Marketing, Advertising, and Public Relations Managers work full time averaging 48 hours per week.

BENEFITS

	Full Time		Full Time
Child Care	0%	Paid Sick Leave	100%
Dental Insurance	100%	Paid Vacation	100%
Life Insurance	94%	Retirement Plan	100%
Medical Insurance	100%	Vision Insurance	69%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers report it is somewhat difficult finding candidates who are fully qualified and experienced for this occupation. Employers surveyed do not hire those without experience. Turnover accounted for many new job openings in this occupation over the past year. Most employers surveyed expect this occupation to remain stable over the next three years (contrary to the projections which indicate a much faster than average growth).

SIZE AND GROWTH

		1992	1999	Change	Separations
Size:	Very Large	7,100	8,320	1,220	900
Growth:	Much Faster than Average				

PRINCIPAL EMPLOYING INDUSTRIES

	Percent	SIC
1. Semiconductors and Related Devices	12%	3674
2. Instruments to Measure Electricity	8%	3825
3. Prepackaged Software	8%	7372

JOB SKILLS

Job-Specific Skills:

Very Important: Ability to maintain good customer relationships, ability to maintain good business relationships, ability to manage multiple priorities, ability to meet deadlines, ability to manage an activity or department, supervisory skills, and media advertising sales skills.
Important: Ability to analyze and use market research data reports, willingness to work irregular hours, willingness to travel, telephone sales techniques, understanding of labor relations practices, good presentation skills, and computer software skills including, word processing, spreadsheets, and databases.

Basic Skills:

Very Important: Basic math skills, writing skills, oral communication skills, ability to read and follow instructions, ability to work under pressure, and attention to detail.
Important: Advanced math skills, keyboarding skills, English grammar and spelling skills, and ability to work independently as well as part of a team.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most recently hired Marketing, Advertising, and Public Relations Managers have a Bachelor's degree.

Experience:

All employers surveyed always require previous work experience and never accept training as a substitute. Most employers require an average of 5 years of experience in marketing management or public affairs.

OTHER INFORMATION

California Occupational Guide No.: 276

Occupational Access & Mobility:

Most employers use in-house promotions to recruit for this occupation. Many use employee referrals. Most employers surveyed promote Marketing, Advertising, and Public Relations Managers to higher level positions such as Senior Manager, Corporate Manager, or Director.

MEDICAL ASSISTANTS

OES CODE: 660050

Medical Assistants perform various duties under the direction of physicians in the examination and treatment of patients. They prepare treatment room, inventory supplies and instruments, and set up patients for attention of physician, handling instruments and materials to physician as directed. They may schedule appointments, keep medical records, or perform other clerical duties.

WAGES•WORK PATTERNS•BENEFITS

WAGES

	Range	Median
Entry Level/No Experience:	\$ 6.75 – 15.00	\$ 10.94
Experienced/ New to Firm:	\$ 7.50 – 16.00	\$ 11.00
3+ Yrs. Experience with Firm:	\$ 10.50 – 17.50	\$ 13.52

WORK PATTERNS

Most Medical Assistants work full time, averaging 39 hours per week, some work part time, averaging 27 hours per week.

BENEFITS

	Full Time	Part Time		Full Time	Part Time
Child Care	7%	0%	Paid Sick Leave	100%	40%
Dental Insurance	93%	27%	Paid Vacation	93%	40%
Life Insurance	73%	27%	Retirement Plan	87%	33%
Medical Insurance	100%	27%	Vision Insurance	87%	27%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers surveyed report it is a little difficult finding both fully qualified and experienced applicants as well as qualified but inexperienced candidates. Turnover and new positions accounted for many new job opportunities in the past year. Most firms expect this occupation to grow over the next three years, some report it to remain stable.

SIZE AND GROWTH

		1992	1999	Change	Separations
Size:	Medium	1,520	1,880	360	150
Growth:	Much Faster than Average				

PRINCIPAL EMPLOYING INDUSTRIES

	Percent	SIC
1. Offices and Clinics of Medical Doctors	65%	8011
2. General Medical and Surgical Hospitals	16%	8062

JOB SKILLS

Job-Specific Skills:

Very Important: Knowledge of medical terminology, possession of a Medical Assistant Certificate, ability to handle crisis situations, ability to apply sterilization techniques, ability to administer injections.

Important: Telephone answering skills, ability to follow billing procedures, computer skills, and word processing skills.

Basic Skills:

Very Important: Writing skills, oral communication skills, ability to read and follow instructions, English grammar and spelling skills, ability to work as part of a team, ability to work under pressure, and attention to detail. Ability to stand continuously for 2 or more hours.

Important: Basic math skills, ability to work independently, and ability to lift at least 10 lbs.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most recently hired Medical Assistants have some college but no degree, and many have a high school diploma or equivalent. Most employers prefer to hire those who have finished an accredited medical assisting program.

Experience:

Most employers always require previous work experience and will sometimes accept training as a substitute for such experience. Most employers require an average of 12 months of experience in the field of medical assisting.

OTHER INFORMATION

California Occupational Guide No.: 513

Occupational Access & Mobility:

Most employers use newspaper ads to recruit for this occupation. Many use public school or program referrals, employee referrals and hire unsolicited applicants. Most firms surveyed promote to higher positions such as Office Coordinator, Department Charge or Supervisor.

PHARMACY TECHNICIANS

OES CODE: 325181

Pharmacy Technicians fill orders for unit doses and prepackaged pharmaceuticals and perform other related duties under the supervision and direction of a pharmacy supervisor or staff pharmacist. Their duties include keeping records of drugs delivered to the pharmacy, sorting incoming merchandise in proper locations, and informing the supervisor of stock needs and shortages. They may clean equipment used in the performance of duties and assist in the care and maintenance of equipment and supplies.

WAGES•WORK PATTERNS•BENEFITS

WAGES

	Union	Median	Non-Union	Median
Entry Level/No Experience:	\$ 11.05 – 11.84	\$ 11.45	\$ 7.00 – 12.75	\$ 9.50
Experienced/ New to Firm:	\$ 12.40 – 13.00	\$ 12.70	\$ 8.00 – 15.00	\$ 10.00
3+ Yrs. Experience with Firm:	\$ 14.00 – 14.27	\$ 14.14	\$ 10.00 – 18.00	\$ 12.00

WORK PATTERNS

Most Pharmacy Technicians work full time 40 hours per week. Some Pharmacy Technicians work on a part time basis averaging 21 hours a week, or on-call averaging 17 hours a week. Many Pharmacy Technicians belong to a union.

BENEFITS

	Full Time		Full Time
Child Care	0%	Paid Sick Leave	73%
Dental Insurance	60%	Paid Vacation	100%
Life Insurance	53%	Retirement Plan	60%
Medical Insurance	100%	Vision Insurance	33%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers find it somewhat difficult finding fully experienced and qualified applicants, and a little difficult finding applicants who are inexperienced. Turnover and temporary positions accounted for many vacancies filled in the past year. Most employers report this occupation to grow in the next three years.

SIZE AND GROWTH

		1992	1999	Change	Separations
Size:	Small	490	590	100	50
Growth:	Much Faster than Average				

PRINCIPAL EMPLOYING INDUSTRIES

	Percent	SIC
1. General Medical and Surgical Hospitals	69%	8062
2. Drug Stores and Proprietary Stores	21%	5912

JOB SKILLS

Job-Specific Skills:

Very Important: Understanding of pharmaceutical terms, ability to accurately record and report information, public contact skills, ability to type at least 30 wpm, ability to measure and calculate using metrics, and ability to complete and explain insurance forms.

Important: Knowledge of chemical compounds, ability to calculate weights and measures, ability to use computerized reference material, office and medical supply inventory and ordering skills, and ability to follow government regulations and reporting requirements, and general computer skills.

Basic Skills:

Very Important: Basic math and keyboarding skills. Oral communication, ability to read and follow instructions, English grammar and spelling skills. Ability to work as part of a team, ability to work under pressure, and attention to detail.

Important: Writing skills, ability to work independently, ability to lift at least 10 lbs., and ability to stand continuously for 2 or more hours.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most recent hires have a Bachelor's degree. Pharmacy Technician Certification is preferred by most employers.

Experience:

Many employers always require previous work experience and some employers never or sometimes accept training as a substitute for experience. Most employers require an average of 12 months of experience as a Pharmacy Technician.

OTHER INFORMATION

California Occupational Guide No.: 456

Occupational Access & Mobility : Most employers recruit new employees via newspaper ads. Many use employee referrals and in-house promotions or transfers. Most employers do not promote to a higher level position. One way to move ahead in this field is to get a degree in pharmacy and get licensed as a Pharmacist. Some employers promote to a Senior Technician position.

Employer Screening Methods: Some employers use medical physicals, drug testing, and police record background checks.

SALES ENGINEERS

OES CODE: 490020

Sales Engineers sell business goods and services that require a technical background equivalent to a baccalaureate degree in engineering. It does not include Engineers whose primary function is not marketing or sales.



WAGES•WORK PATTERNS•BENEFITS

WAGES

	Range	Commission	Median
Entry Level/No Experience:	Most employers do not hire at this level		
Experienced/ New to Firm:	\$ 14.00 – 34.00	\$ 2.50 – 38.25	\$ 20.95
3+ Yrs. Experience with Firm:	\$ 19.25 – 48.00	\$ 3.75– 49.75	\$ 33.56

WORK PATTERNS

Most Sales Engineers work full time, averaging 47 hours per week.

BENEFITS

	Full Time		Full Time
Child Care	0%	Paid Sick Leave	87%
Dental Insurance	93%	Paid Vacation	100%
Life Insurance	87%	Retirement Plan	80%
Medical Insurance	100%	Vision Insurance	67%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers surveyed report it is somewhat difficult finding applicants who are both qualified and experienced as well as those who are qualified but inexperienced. Newly created positions accounted for most new job opportunities in the past year. Most employers expect overall employment in this occupation to grow over the next three years (contrary to the projections, which indicates decline). However many employers report it to remain stable.

SIZE AND GROWTH

		1992	1999	Change	Separations
Size:	Large	2,780	2,750	-30	520
Growth:	Decline				

PRINCIPAL EMPLOYING INDUSTRIES

	Percent	SIC
1. Semiconductors and Related Devices	34%	3674
2. Computer Integrated Systems Design	11%	7373
3. Prepackaged Software	10%	7372

JOB SKILLS

Job-Specific Skills:

Very Important: Ability to demonstrate technical applications of products, ability to maintain good customer relationships, develop and deliver technical presentations, ability to work on multiple projects, and ability to manage unexpected situations and circumstances.

Important: Create and manage product requirement documents, ability to conduct sales training, design and implement a product strategy, perform competitive market analysis, and knowledge of database, word processing, desktop publishing and spreadsheet applications.

Basic Skills:

Very Important: Advanced math skills, keyboarding skills, writing and oral communication skills, ability to read and follow instructions, and English grammar and spelling skills. Ability to work independently as well as part of a team, ability to work under pressure, and attention to detail.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most recently hired Sales Engineers have a Bachelor's degree.

Experience:

Most firms surveyed always require previous work experience and never accept training as a substitute for experience. Employers require an average of 4 years of related work experience in areas such as, engineering, technical support and/or sales.

OTHER INFORMATION

California Occupational Guide No.: Not Available

Occupational Access & Mobility:

Most employers use employee referrals, newspaper ads, and in-house promotions or transfers to recruit for this occupation. Most firms surveyed promote Sales Engineers to higher level positions, such as Senior Sales Engineer, Field Sales Engineer, and/or Sales Manager.

SALES REPRESENTATIVES, SCIENTIFIC AND RELATED PRODUCTS AND SERVICES -EXCEPT RETAIL**OES CODE: 490050**

Sales Representatives, Scientific and Related Products and Services, sell products or services requiring scientific or similar knowledge for wholesalers or manufacturers. This knowledge is in areas such as biology, engineering, chemistry, and electronics, and is normally obtained from 2 or 3 years of post secondary education or its equivalent. They sell products such as aircraft, agricultural equipment and supplies, industrial machinery, medical supplies, electronic equipment, chemicals, and precision instruments. It does not include Sales Representatives in retail sales, or those who must have a technical background equivalent to a bachelor's degree in engineering.

WAGES•WORK PATTERNS•BENEFITS**WAGES**

	Range	Commission	Median
Entry Level/No Experience:	<i>Most employers do not hire at this level</i>		
Experienced/ New to Firm:	\$ 11.50 – 31.25	\$00.50 – 36.00	\$ 20.62
3+ Yrs. Experience with Firm:	\$ 14.00 – 139.00	\$00.50 – 57.50	\$ 27.81

WORK PATTERNS

Most Sales Representatives work full time averaging 42 hours per week, some work part time averaging 25 hours per week.

BENEFITS

	Full Time		Full Time
Child Care	0%	Paid Sick Leave	100%
Dental Insurance	100%	Paid Vacation	100%
Life Insurance	82%	Retirement Plan	88%
Medical Insurance	100%	Vision Insurance	71%

EMPLOYMENT TRENDS**SUPPLY/DEMAND ASSESSMENT**

Employers report it is somewhat difficult finding applicants who are fully qualified and experienced, and not difficult finding qualified but inexperienced candidates. Turnover and new positions accounted for many new job opportunities in the past year. Most employers surveyed report this occupation to grow over the next three years (contrary to the projections which indicate a slower than average growth rate for this occupation).

SIZE AND GROWTH

		1992	1999	Change	Separations
Size:	Very Large	7,870	8,380	510	1,200
Growth:	Slower than Average				

PRINCIPAL EMPLOYING INDUSTRIES

	Percent	SIC
1. Computers, Peripherals and Software	14%	5045
2. Electronic Computers	12%	3571
3. Prepackaged Software	11%	7372

JOB SKILLS**Job-Specific Skills:**

Very Important: Ability to demonstrate knowledge of specific products, customer service skills, verbal presentation skills, ability to apply sales techniques, telephone sales skills, and knowledge of contract, bidding and proposal procedures.

Important: Cost estimating skills, ability to prepare and arrange sales contracts, computer software skills including, spreadsheets, word processing and databases, willingness to travel, record keeping skills, and report writing skills.

Basic Skills:

Very Important: Basic math skills, writing skills, oral communication skills, ability to read and follow instructions, English grammar and spelling skills. Ability to work independently as well as part of a team, ability to work under pressure, and attention to detail.

EDUCATION, TRAINING & EXPERIENCE**Education and Training:**

Most recently hired Sales Representatives have a Bachelor's degree.

Experience:

Most employers always require previous work experience. Many employers are never willing to substitute training for work experience, although many employers report doing so only sometimes. Many employers require recent hires to undergo an on-the job training period for about 6-12 months. Most employers require an average of 24 months of related work experience in either product sales, technical sales, or customer service.

OTHER INFORMATION

California Occupational Guide No.: Not Available

Occupational Access & Mobility:

Most employers recruit through employee referrals. Many also use private employment agencies and newspaper ads. Most employers surveyed report promoting Sales Representatives to higher level positions such as Field Sales Representative, Regional Sales Representative, or Product Marketing Manager.

SECRETARIES, GENERAL

OES CODE: 551080

Secretaries relieve officials of clerical work and minor administrative and business detail by scheduling appointments, giving information to callers, taking dictation, composing and typing routine correspondence, reading and routing incoming mail, and filing correspondence and other records. They may perform various other assigned clerical duties. It does not include Medical and Legal Secretaries.

WAGES•WORK PATTERNS•BENEFITS

WAGES

	Range	Median
Entry Level/No Experience:	\$ 7.00 – 12.00	\$ 10.00
Experienced/ New to Firm:	\$ 8.00 – 13.50	\$ 10.00
3+ Yrs. Experience with Firm:	\$ 10.00 – 15.75	\$ 12.25

WORK PATTERNS

Most Secretaries work full time, averaging 43 hours a week.

BENEFITS

	Full Time		Full Time
Child Care	0%	Paid Sick Leave	81%
Dental Insurance	69%	Paid Vacation	94%
Life Insurance	50%	Retirement Plan	63%
Medical Insurance	94%	Vision Insurance	25%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers report it is a little difficult finding candidates that are both fully qualified and experienced as well as those who are qualified but inexperienced. Turnover accounted for most new job opportunities in the past year. Most firms expect overall employment in this occupation to remain stable in the next three years (projections indicate a slower than average growth in this occupation).

SIZE AND GROWTH

		1992	1999	Change	Separations
Size:	Very Large	19,220	19,590	370	2,940
Growth:	Slower than Average				

PRINCIPAL EMPLOYING INDUSTRIES

	Percent	SIC
1. Help Supply Services (Temp Agencies)	7%	7363
2. Elementary and Secondary Schools	5%	8211
3. Commercial Physical Research	4%	8731
4. Prepackaged Software	4%	7372

JOB SKILLS

Job-Specific Skills:

Very Important: Knowledge of word processing, telephone answering skills, alphabetic and numeric filing skills, ability to maintain an appointment calendar, and proof reading skills.

Important: Spreadsheets and database software skills.

Basic Skills:

Very Important: Basic math, writing and oral communication skills, ability to read and follow instructions, English grammar and spelling skills. Ability to work independently as well as part of a team, ability to work under pressure, and attention to detail, and ability to sit continuously for 2 or more hours.

Important: Keyboarding skills.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most recently hired Secretaries have some college but no degree. Employers prefer completion of a secretarial training program from an accredited school or training in computer applications ranging from word processing and spreadsheets to databases.

Experience:

Many employers usually require previous work experience and are only sometimes willing to substitute training for such experience. Most employers require an average of 12 months of related work experience as a Secretary or Administrative Assistant.

OTHER INFORMATION

California Occupational Guide No.: 128

Occupational Access & Mobility: Most employers use newspaper ads and employee referrals to recruit for this occupation. Many also use in-house promotions or transfers. Many employers promote Secretaries to higher level positions such as, Administrative or Executive Secretary or supervisory positions. Occasionally, employers promote Secretaries to managerial level positions. In smaller offices, advancement may be limited to gradual increases in responsibility and pay.

SOCIAL WORKERS - MEDICAL AND PSYCHIATRIC

OES CODE: 273020

Medical and Psychiatric Social Workers counsel and aid individuals and families with problems that may arise during or following the recovery from physical or mental illness by providing supportive services designed to help the persons understand, accept, and follow medical recommendations. It includes Chemical Dependency Counselors.

WAGES•WORK PATTERNS•BENEFITS

WAGES

	Union	Median	Non-Union	Median
Entry Level/No Experience:	\$ 16.42 – 18.87	\$ 17.64	\$ 11.25 – 18.00	\$ 13.90
Experienced/ New to Firm:	\$ 16.30 – 20.74	\$ 16.42	\$ 12.00 – 29.00	\$ 17.00
3+ Yrs. Experience with Firm:	\$ 18.22 – 25.10	\$ 19.86	\$ 14.00 – 37.00	\$ 19.00

WORK PATTERNS

Most Social Workers work full time averaging 40 hours per week, some are also employed part time averaging 24 hours per week. Most Social Workers belong to a union.

BENEFITS

	Full Time	Part Time		Full Time	Part Time
Child Care	6%	0%	Paid Sick Leave	75%	25%
Dental Insurance	100%	25%	Paid Vacation	100%	25%
Life Insurance	63%	19%	Retirement Plan	81%	25%
Medical Insurance	100%	25%	Vision Insurance	38%	6%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers surveyed report it is somewhat difficult finding applicants that are both fully qualified and experienced as well as applicants who are qualified but inexperienced. Many of the vacancies filled in the last 12 months were due to turnover and new positions. Most firms indicate employment in this occupation to grow in the next three years, although some report it to remain stable.

SIZE AND GROWTH

		1992	1999	Change	Separations
Size:	Small	1,210	1,380	170	80
Growth:	Faster than Average				

PRINCIPAL EMPLOYING INDUSTRIES

	Percent	SIC
1. Local Government	37%	9030
2. Individual and Family Services	15%	8322
3. Specialty Hospitals Except Psychiatric	12%	8069

JOB SKILLS

Job-Specific Skills:

Very Important: Knowledge of family social work, ability to interview others for information, ability to handle crisis situations, ability to apply complex rules and regulations, understanding of a variety of cultures, knowledge of protective services for children and adults, and psychiatric social work skills.

Important: Ability to treat substance abuse, knowledge of entitlement programs and related law, sexual assault counseling, word processing skills, and good documentation skills.

Basic Skills:

Very Important: Basic math and writing skills, oral communication skills, ability to read and follow instructions, and English grammar and spelling skills. Ability to work independently as well as part of a team, ability to work under pressure, and attention to detail.

Important: Ability to lift at least 10 lbs.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most recent hires have a Master's degree in Social Work, some have a Bachelor's degree.

Experience:

Most employers always require previous work experience and some employers usually accept training as a substitute. Most employers require a minimum of 2 years of related work experience.

OTHER INFORMATION

California Occupational Guide No.: 122

Occupational Access & Mobility:

Most employers use public school or program referrals to recruit for this occupation. Many employers also use employee referrals, newspaper ads, private school referrals, and the Employment Development Department. Most employers promote Social Workers to higher positions, such as Coordinator, Clinical Supervisor, or Director.

SOFTWARE ENGINEERS

DOT CODE: 030.062-999

Software Engineers research, design, and develop computer software systems, in conjunction with hardware product development, applying principles and techniques of computer science, engineering, and mathematical analysis. They consult with hardware engineers and other engineering staff to evaluate interface between hardware and software, and operational and performance requirements of overall system. They formulate and design software systems to predict and measure outcome and consequences of design. They develop and direct software system testing procedures, programming, and documentation.

WAGES•WORK PATTERNS•BENEFITS

WAGES

	Range	Median
Entry Level/No Experience:	\$ 14.00 – 21.50	\$ 19.18
Experienced/ New to Firm:	\$ 13.50 – 31.25	\$ 23.97
3+ Yrs. Experience with Firm:	\$ 18.25 – 38.25	\$ 29.75

WORK PATTERNS

Most Software Engineers work full-time for an average of 45 hours a week.

BENEFITS

	Full Time		Full Time
Child Care	33%	Paid Sick Leave	93%
Dental Insurance	100%	Paid Vacation	80%
Life Insurance	100%	Retirement Plan	53%
Medical Insurance	100%	Vision Insurance	87%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers report it is somewhat difficult finding applicants who are both fully experienced and qualified as well as qualified but inexperienced. New positions accounted for many vacancies filled in the past year, some vacancies also resulted due to turnover. Most employers report this occupation to grow in the next three years.

*SIZE AND GROWTH

		1992	1999	Change	Separations
Size:	Very Large	14,020	18,960	4,940	520
Growth:	Much Faster than Average				

*PRINCIPAL EMPLOYING INDUSTRIES

	Percent	SIC
1. Electronic Computers	34%	3571
2. Prepackaged Software	16%	7372
3. Semiconductors and Related Devices	13%	3674

*Projection numbers for OES code 221270 (Computer Engineers) have been used

JOB SKILLS

Job-Specific Skills:

Very Important: Ability to design programs, ability to write software programs in real time environment, ability to write software program specifications, ability to fix bugs in software, knowledge of various operating systems, ability to use personal computer and assorted software, ability to communicate technical material in written and verbal form, and ability to work with other engineers as a team member.

Important: Working knowledge of various programming languages and operating systems, including C, C++, UNIX, Windows platform, HTML, TCP/IP, and GUI, ability to develop automated test tools, knowledge of computer engineering and electronics, and database software skills.

Basic Skills:

Very Important: Basic math skills, ability to read and follow instructions, ability to work independently as well as part of a team, ability to work under pressure, and attention to detail.

Important: Advanced math skills, keyboarding skills, writing and oral communication skills, and English grammar and spelling skills.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most recent hires in this field have a Bachelor's degree, some have a graduate degree.

Experience:

Most employers always require previous work experience and many employers never or sometimes accept training as a substitute. Most employers require an average of 3 years of work experience as a Software Engineer.

OTHER INFORMATION

California Occupational Guide No.: Not Available

Occupational Access & Mobility

Most employers recruit via private employment agencies, newspaper ads, employee referrals and in-house promotions or transfers. Many employers also use job fairs and the internet. Most firms surveyed promote to higher level positions such as Senior Software Engineer to Project Leader/Manager.

TRAFFIC, SHIPPING, AND RECEIVING CLERKS

OES CODE: 580280

Traffic, Shipping, and Receiving Clerks verify and keep records on incoming and outgoing shipments and prepare items for shipment. Duties include assembling, addressing, stamping, and shipping merchandise or material; receiving, unpacking, verifying, and recording incoming merchandise or material; and arranging for the transportation of products. It does not include Stock Clerks, and workers whose primary duties involve weighing and checking.



WAGES•WORK PATTERNS•BENEFITS

WAGES

	Range	Median
Entry Level/No Experience:	\$ 5.00 –10.00	\$ 7.50
Experienced/ New to Firm:	\$ 6.00 –12.00	\$ 8.50
3+ Yrs. Experience with Firm:	\$ 7.50 –16.00	\$ 10.00

WORK PATTERNS

Most Traffic, Shipping, and Receiving Clerks work full time averaging 40 hours per week.

BENEFITS

	Full Time		Full Time
Child Care	0%	Paid Sick Leave	88%
Dental Insurance	94%	Paid Vacation	100%
Life Insurance	81%	Retirement Plan	88%
Medical Insurance	100%	Vision Insurance	50%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers report it is a little difficult finding candidates who are both fully qualified and experienced as well as those who are qualified but inexperienced. Turnover accounted for many new job opportunities in the past year. Most employers expect overall employment in this occupation to grow over the next three years.

SIZE AND GROWTH

		1992	1999	Change	Separations
Size:	Very Large	6,450	7,590	1,140	590
Growth:	Much Faster than Average				

PRINCIPAL EMPLOYING INDUSTRIES

	Percent	SIC
1. U.S. Postal Service	15%	4311
2. Electronic Parts and Equipment	7%	5065
3. Prepackaged Software	6%	7372
4. Computers Peripherals and Software	5%	5045

JOB SKILLS

Job-Specific Skills:

Important: Record keeping skills and understanding of inventory techniques, computer software skills in database applications, ability to plan and organize the work of others, and possession of a valid driver's license.

Basic Skills:

Very Important: Basic math skills, oral communication skills, ability to read and follow instructions, ability to work independently as well as part of a team, and attention to detail.
Important: Ability to work under pressure, and ability to lift at least 10-50 lbs.

Employers consider basic English skills and Forklift certification to be in short supply.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most recently hired Traffic, Shipping, and Receiving Clerks have a high school diploma or its equivalent.

Experience:

Many employers never require work experience and sometimes accept training as a substitute. Most employers report learning this job through on-the-job training. Some employers require an average of 12 months of experience as a Shipping/Receiving Clerk.

OTHER INFORMATION

California Occupational Guide No.: 63

Occupational Access & Mobility: Most employers surveyed report using newspaper ads, employee referrals and in-house promotions or transfers to recruit for this occupation. Many employers use the Employment Development Department and hire unsolicited applicants. Most employers surveyed promote employees in this occupation to higher level positions such as Supervisor or Warehouse Manager.

Employer Screening Methods: Most employers use DMV checks and many use drug testing.

TRUCK DRIVERS - HEAVY OR TRACTOR TRAILER

OES CODE: 971020

Heavy or Tractor Trailer Truck Drivers drive tractor trailer combinations or trucks with a capacity of more than three tons to transport and deliver goods, livestock, or materials in liquid, loose or packaged form. They may be required to unload trucks.



WAGES•WORK PATTERNS•BENEFITS

WAGES

	Union	Median	Non-Union	Median
Entry Level/No Experience:	\$ 12.00 – 18.36	\$ 13.62	\$ 10.00 – 12.50	\$ 11.63
Experienced/ New to Firm:	\$ 13.75 – 18.36	\$ 15.43	\$ 10.00 – 16.75	\$ 12.75
3+ Yrs. Experience with Firm:	\$ 18.00 – 18.88	\$ 18.29	\$ 13.00 – 18.00	\$ 15.70

WORK PATTERNS

Most Truck Drivers work full time, averaging 42 hours per week. This occupation has some seasonal openings averaging 40 hours a week. Some Truck Drivers belong to a union.

BENEFITS

	Full Time		Full Time
Child Care	0%	Paid Sick Leave	67%
Dental Insurance	80%	Paid Vacation	80%
Life Insurance	40%	Retirement Plan	40%
Medical Insurance	100%	Vision Insurance	53%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers surveyed report it is somewhat difficult finding fully qualified and experienced candidates for this occupation, they report it is a little difficult finding candidates who are qualified but inexperienced. Temporary positions accounted for most new job opportunities in the past year. Most employers surveyed report this occupation to grow in the next three years, though some report it to remain stable.

SIZE AND GROWTH

	1992	1999	Change	Separations
Size:	Large	3,990	4,750	760
Growth:	Much Faster than Average			

PRINCIPAL EMPLOYING INDUSTRIES

	Percent	SIC
1. Trucking, Except Local	26%	4213
2. Local Trucking, Without Storage	11%	4212
3. Grocery Stores	7%	5411

JOB SKILLS

Job-Specific Skills:

Very Important: Possession of a valid Class A driver's license.

Important: Record keeping skills, map reading skills, ability to read invoices, and ability to load and unload freight.

Basic Skills:

Very Important: Ability to read and follow instructions, ability to work independently, ability to work under pressure, attention to detail, and ability to do strenuous, physically demanding work.

Important: Basic math skills, oral communication skills, ability to work as part of a team, ability to lift at least 10-50 lbs., and ability to sit continuously for 2 or more hours.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Most recent hires in this occupation have less than a high school education, some have a high school diploma or equivalent. Most employers require recent hires to have a Class A driver's license.

Experience:

Many employers are sometimes willing to substitute training for work experience. Most employers require 12 months of related experience as a Driver.

OTHER INFORMATION

California Occupational Guide No.: 255

Occupational Access & Mobility: Most employers use newspaper ads and employee referrals to recruit for this occupation. Some use the Employment Development Department and union hall referrals. Most employers promote to higher level positions such as Dock / Route Supervisor.

Employer Screening Methods: Most employers use DMV checks and drug testing. Many use medical physicals, and some use a driving exam.

WHOLESALE AND RETAIL BUYERS - EXCEPT FARM PRODUCTS

OES CODE: 213020

Wholesale and Retail Buyers buy merchandise or commodities (other than farm products) for resale to consumers at the wholesale or retail level, including both durable and nondurable goods. They analyze past buying trends, sales records, and the price and quality of merchandise to determine value and yield. Buyers select, order, and authorize payment of merchandise according to contractual agreements. They may conduct meetings with sales personnel and introduce new products. It includes Assistant Buyers.

WAGES•WORK PATTERNS•BENEFITS

WAGES*

	Range	Median
Entry Level/No Experience:	\$ 6.60 – 8.00	\$ 7.30
Experienced/ New to Firm:	\$8.00 – 15.00	\$ 11.00
3+ Yrs. Experience with Firm:	\$ 11.00– 26.75	\$ 14.44

* Wages may vary with type and volume of merchandise bought.

WORK PATTERNS

Most Wholesale and Retail Buyers work full time, averaging 40 hours per week.

BENEFITS

	Full Time		Full Time
Child Care	0%	Paid Sick Leave	44%
Dental Insurance	67%	Paid Vacation	100 %
Life Insurance	50%	Retirement Plan	83%
Medical Insurance	100%	Vision Insurance	11%

EMPLOYMENT TRENDS

SUPPLY/DEMAND ASSESSMENT

Employers report it is somewhat difficult finding fully qualified and experienced candidates, but not difficult finding qualified inexperienced candidates. Newly created positions accounted for many job opportunities in the past year, many also resulted from turnover. Contrary to the projections (which indicate slower than average growth), most firms surveyed expect overall employment in this occupation to grow over the next three years.

SIZE AND GROWTH

		1992	1999	Change	Separations
Size:	Small	1,160	1,230	70	230
Growth:	Slower than Average				

PRINCIPAL EMPLOYING INDUSTRIES

	Percent	SIC
1. Grocery Stores	19%	5411
2. Electronic Parts and Equipment	13%	5065
3. Computers, Peripherals and Software	10%	5045

JOB SKILLS

Job-Specific Skills:

Very Important: Ability to follow purchasing procedures, understanding of inventory techniques, ability to demonstrate knowledge of specific products, public contact skills, record keeping skills, telephone answering skills, and verbal presentation skills.

Important: Ability to use word processing and spreadsheet applications, business math, and supervisory skills.

Basic Skills:

Very Important: Basic math and writing skills, oral communication skills, ability to read and follow instructions, ability to work independently as well as part of a team, ability to work under pressure, and attention to detail. Ability to lift at least 10 lbs.

Important: English grammar and spelling skills.

EDUCATION, TRAINING & EXPERIENCE

Education and Training:

Many recently hired Wholesale and Retail Buyers have some college but no degree, some have a Bachelor's degree. Some employers recruit and train college graduates and applicants who have completed post secondary programs in business administration or marketing.

Experience:

Many employers usually require previous work experience and are usually willing to substitute training for such experience. Most employers require an average of 2 years of work experience in sales, customer service, or as a Buyer.

OTHER INFORMATION

California Occupational Guide No.: 118

Occupational Access & Mobility:

Most employers use employee referrals, newspaper ads, and in-house promotion or transfer to recruit for this position. Most employers will promote to higher level positions, such as Senior Buyer, or Manager.

APPENDIX A: SUMMARY OF OCCUPATIONS STUDIED

1995

Assemblers – Electrical & Electronic Equipment	Human Services Workers
Biological Scientists	Instructional Aides (Resurvey 1991)
Biological, Agricultural & Food Technicians (Resurvey 1992)	LAN/WAN (Local/Wide Area Network) Managers
Bookkeeping, Accounting & Auditing Clerks	Medical & Clinical Laboratory Technologists
Chemical Technicians & Technologists (Resurvey 1990)	Nurse Aides (Resurvey 1991)
Computer Engineers	Painters & Paperhangers
Computer Operators (Resurvey 1990)	Precision Patternmakers, Model Makers & Layout Workers
Cooks – Restaurant	Police Patrol Officers
Correction Officers & Jailers	Recreation Workers (Resurvey 1991) ¹
Dispatchers – except Police & Ambulance (Resurvey 1991)	Registered Nurses
Electricians	Respiratory Care Practitioners (Resurvey 1991)
Gardeners & Groundskeepers	Truck Driver – Light, include Delivery & Route (Resurvey 1991)
Hazardous Waste Management Specialists	

1992

Bill & Account Collectors	Insurance Claims Clerks
Biological, Agricultural & Food Technicians	Laundry & Drycleaning Machine Operators & Tenders
Bus & Truck Mechanics & Diesel Engine Specialists	Machine Tool Cutting Operators & Tenders
Combined Food Preparation & Service Workers	Machinery Maintenance Mechanics
Computer Programmers, including Aides	Manicurists
Drafters	Massage Therapists (Limited survey)
Electrical & Electronic Assemblers	Mechanical Engineers
Electrical & Electronic Engineering Technicians	Pest Controllers & Assistants
Electrocardiograph Technicians & Technologists	Physical Therapist Assistants
Electronic Home Equipment Repairers	Physical Therapy Aides
Electronic Semiconductor Processors	Procurement Clerks
First Line Supervisors & Managers/Supervisors, Production	Telephone & Cable TV Line Installers & Repairers
Hazardous Materials & Waste Technicians (Limited survey)	Welders & Cutters
Industrial Production Managers	

1994

Accountants & Auditors	Kindergarten Teachers
Assemblers & Fabricators	Loan Officers & Counselors
Billing, Cost & Rate Clerks	Maids & Housekeepers
Counter & Rental Clerks	Paralegal Personnel (1990)
Data Processing Equipment Repairers (1990)	Personnel Clerks
Dental Hygienists	Physicians' Assistants
Desktop Publishing – Graphic Designers (Limited survey)	Preschool Teachers
Drafters (1992)	Productions, Planning & Expediting Clerks (1990)
Emergency Medical Technicians (Limited survey)	Secretaries, Legal
English Foreign Language Teachers	Sheet Metal Workers
Financial Managers	Technical Writers
Home Health Care Workers (1990)	Telephone & Cable TV Installers & Repairers (1992)
Industrial Truck & Tractor Operators	Tellers

1991

Bakers – Bread & Pastry	Operating Engineers
Cabinetmakers & Bench Carpenters	Personnel, Training & Labor Relations Specialists
Carpet Installers	Precision Inspectors, Testers, & Graders
Chemical Technicians & Technologists	Receptionists & Information Clerks
Cooks – Institutions or Cafeteria	Recreation Workers
Court Reporters (Limited survey)	Reservation & Transportation Ticket Agents
Employment Interviewers – Private or Public	Respiratory Care Practitioners
Industrial Designers (Limited survey)	Salespersons – Parts
Instructional Aides	Sales Representatives, Scientific & Related Products
Loan & Credit Clerks	Tool & Die Makers
New Accounts Clerks	Travel Agents
Nurse Aides	Truck Drivers, Heavy or Tractor Trailers
Offset Lithographic Press Setters & Set-Up Operators	Truck Drivers, Light – Include Delivery & Route Drivers

1993

Automotive Mechanics (1989)	Medical Records Technicians
Child Care Workers	Merchandise Displayers & Window Trimmers
Dietetic Technicians	Opticians – Dispensing & Measuring
Drug & Alcohol Counselors (Limited survey)	Pharmacy Technicians
Electromedical & Biomedical Equipment Repairers	Photographic Processing Machine Operators
Floral Designers	Psychiatric Aides
Food Service Managers	Real Estate Appraisers
General Office Clerks	Sales Agents – Securities, Commodities & Financial Services
Guards & Watch Guards	Stock Clerks – Stock Room, Warehouse, Storage Yard
Hand Packers & Packagers	Surgical Technicians
Heating, Air Conditioning & Refrigeration Mechanics (1990)	Systems Analysts – Electronic Data Processing
Highway Maintenance Workers	Vocational & Educational Counselors
Licensed Vocational Nurses	Water & Liquid Waste Treatment Plant & Systems Operators
Medical & Clinical Laboratory Assistants	

1990

Animal Caretakers	Paralegal Personnel
Artists	Plumbers, Pipefitters & Steamfitters
Computer Operators	Production, Planning & Expediting Clerks
Data Process Equipment Repairers	Property & Real Estate Managers
Dispatchers	Radiologic Technologists – Diagnostic
Drywall Installers	Radiologic Technologists – Therapeutic
Heating, Air Conditioning & Refrigeration Mechanics	Secretaries, Medical
Home Health Care Workers	Tapers
Hotel Desk Clerks	Technical Assistants – Library
Janitors & Cleaners	Underwriters
Machinists	Wholesale & Retail Buyers
Maintenance Repairers – General Utility	Writers & Editors
Medical Assistants	

APPENDIX B: 50 OCCUPATIONS WITH THE GREATEST TOTAL JOB GROWTH SANTA CLARA COUNTY 1992-1999

CA OES		OCCUPATIONAL TITLE	Size 1992	Size 1999	Absolute Change	Percent Change	Santa Clara Co.			
Rank	Code						Openings due to Separations	Separations	Absolute Change	Median hrly. wage new w/ experience
1	490112	SALESPERSONS - RETAIL (non-vehicle)	20,970	22,860	1,890	9.0%	5,420	7,310	NA	
2	221270	COMPUTER ENGINEERS	14,020	18,960	4,940	35.2%	520	5,460	\$20.60	
3	490230	CASHIERS	12,090	13,510	1,420	11.7%	4,040	5,460	NA	
4	650080	WAITERS & WAITRESSES	11,160	12,420	1,260	11.3%	3,950	5,210	NA	
5	553470	GENERAL OFFICE CLERKS	20,420	22,900	2,480	12.1%	2,720	5,200	\$10.99	
6	190050	GENERAL MANAGERS, TOP EXECUTIVES	22,050	23,620	1,570	7.1%	2,310	3,880	NA	
7	221260	ELECTRICAL & ELECTRONIC ENGINEERS	15,710	16,980	1,270	8.1%	2,330	3,600	NA	
8	670050	JANITORS, CLEANERS--EXCEPT MAIDS	10,710	12,490	1,780	16.6%	1,630	3,410	NA	
9	650380	FOOD PREPARATION WORKERS	8,220	9,460	1,240	15.1%	2,140	3,380	NA	
10	325020	REGISTERED NURSES	11,900	14,040	2,140	18.0%	1,190	3,330	\$20.50	
11	551080	SECRETARIES, GENERAL	19,220	19,590	370	1.9%	2,940	3,310	NA	
12	399990	OTHER PROFESSIONAL, PARAPROF., TECHNICAL	9,340	10,900	1,560	16.7%	1,290	2,850	NA	
13	251051	COMPUTER PROGRAMMERS, INCL AIDES	12,000	12,640	640	5.3%	1,980	2,620	\$18.90	
14	510000	FIRST-LINE SUP/MGR, CLERK, ADM SUP	9,600	10,570	970	10.1%	1,570	2,540	NA	
15	410000	FIRST-LINE SUP/MGR--SALES	8,710	10,160	1,450	16.6%	1,040	2,490	NA	
16	553050	RECEPTIONISTS, INFORMATION CLERKS	8,200	9,600	1,400	17.1%	1,040	2,440	NA	
17	553380	BOOKKEEPING, ACCOUNTING & AUDITING CLERKS	13,210	13,760	550	4.2%	1,710	2,260	\$13.00	
18	971050	TRUCK DRIVERS, LIGHT	6,270	7,720	1,450	23.1%	780	2,230	\$8.00	
19	251020	SYSTEMS ANALYSTS--ELEC DATA PROC	5,120	7,140	2,020	39.5%	190	2,210	\$19.38	
20	130110	MKTNG, ADV, PUB-REL MANAGERS	7,100	8,320	1,220	17.2%	900	2,120	NA	
21	490080	SALES REPS, NON-SCIENTIFIC EX RET	8,710	9,380	670	7.7%	1,330	2,000	NA	
22	130170	ENGINEER, MATHEMATICIAN, & NATURAL SCIENCE MGRS	8,560	9,580	1,020	11.9%	920	1,940	NA	
23	225050	ELECT, ELECTRONIC ENGINEERING TECH	12,970	13,800	830	6.4%	1,030	1,860	\$12.00	
24	630470	GUARDS & WATCH GUARDS	5,760	6,760	1,000	17.4%	850	1,850	\$8.00	
25	315211	INSTRUCTIONAL AIDES	7,270	8,550	1,280	17.6%	510	1,790	\$9.00	
26	650170	COUNTER ATTENDANTS--FOOD	2,300	2,450	150	6.5%	1,590	1,740	\$7.00	
27	580280	TRAFFIC, SHIPPING, RECEIVING CLKS	6,450	7,590	1,140	17.7%	590	1,730	NA	
28	490050	SALES REPS, SCIENTIFIC--EX RETAIL	7,870	8,380	510	6.5%	1,200	1,710	NA	
29	851320	MAINTENANCE REPAIRERS, GENERAL UTILITY	6,410	7,310	900	14.0%	730	1,630	NA	
30	313050	TEACHERS--ELEMENTARY SCHOOL	8,030	8,680	650	8.1%	930	1,580	NA	
31	650410	COMBINED FOOD PREP & SERVICE	5,830	5,940	110	1.9%	1,420	1,530	\$5.00	
32	211140	ACCOUNTANTS & AUDITORS	6,550	7,370	820	12.5%	670	1,490	\$15.99	
33	650140	DINING ROOM ATTENDANTS, BAR HELPERS	2,790	3,010	220	7.9%	1,260	1,480	NA	
34	650260	COOKS--RESTAURANT	3,780	4,390	610	16.1%	830	1,440	\$7.00	
35	130020	FINANCIAL MANAGERS	6,620	7,350	730	11.0%	660	1,390	\$29.07	
36	313080	TEACHERS--SECONDARY SCHOOL	4,270	4,920	650	15.2%	680	1,330	NA	
37	871020	CARPENTERS	2,960	3,740	780	26.4%	490	1,270	NA	
38	971020	TRUCK DRIVERS, HEAVY	3,990	4,750	760	19.0%	490	1,250	NA	
39	580230	STOCK CLERKS--STOCKROOM, WAREHOUSE	5,960	6,190	230	3.9%	940	1,170	\$9.25	
40	660080	NURSE AIDES, ORDERLIES, ATTENDANTS	4,710	5,470	760	16.1%	400	1,160	NA	
41	810080	FIRST-LINE SUP/MGR-PRODUCTION	4,960	4,990	30	0.6%	1,000	1,030	\$16.08	
42	872020	ELECTRICIANS	2,770	3,390	620	22.4%	400	1,020	\$12.00	
43	790300	GARDENERS, GROUNDSKEEPERS-EX FARM	3,390	4,070	680	20.1%	320	1,000	\$12.29	
44	853020	AUTOMOTIVE MECHANICS	3,070	3,420	350	11.4%	640	990	\$12.00	
45	281080	LAWYERS	2,660	3,340	680	25.6%	270	950	NA	
46	490210	STOCK CLERKS--SALES FLOOR	4,570	4,780	210	4.6%	730	940	NA	
47	989020	HAND PACKERS & PACKAGERS	4,310	4,560	250	5.8%	670	920	\$6.50	
48	553210	FILE CLERKS	2,210	2,440	230	10.4%	670	900	NA	
49	670020	MAIDS & HOUSEKEEPING CLEANERS	3,140	3,700	560	17.8%	330	890	\$5.83	
50	531020	TELLERS	3,150	3,020	-130	-4.1%	1,010	880	\$8.14	

NOVA PRIVATE INDUSTRY COUNCIL
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